

Program Evaluation of ARC's Tourism, Cultural Heritage and Natural Asset-Related Projects

Prepared for:

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EXECUTIVE SUMMARY

The Regional Technologies Strategies (RTS) project team, including Mt. Auburn Associates and Appalachian State University, was charged with examining and critiquing the Appalachian Regional Commission's (ARC) investment in Tourism, Cultural Heritage and Natural Asset-Related projects with a specific focus on how those projects were evaluated. The projects were examined within the context of the ARC's Strategic Plan entitled *Moving Appalachia Forward: ARC Strategic Plan, 2005–2010*.

- ✚ Goal 1: Increase job opportunities and per capita income in Appalachia to reach parity with the nation
- ✚ Goal 2: Strengthen the capacity of the people of Appalachia to compete in the global economy
- ✚ Goal 3: Develop and improve Appalachia's infrastructure to make the Region economically competitive
- ✚ Goal 4: Build the Appalachian Development Highway System to reduce Appalachia's isolation

Goals 1, 2 and 3 are most relevant to the tourism projects analyzed here. These projects were funded to directly and indirectly improve the ability of ARC residents to build sustainable economic futures based on the heritage, history, beauty and internal entrepreneurial resources of the region.

We were asked to look at the portfolio of funded projects, how they were evaluated under ARC guidelines, and examine the projects' reported impacts. From there we examined how well the evaluation guidelines helped grant recipients *tell the story* of the projects' successes and failures. We then considered ways in which the evaluation procedures and rules could be modified to help grant recipients and ARC improve the evaluation, use evaluation to improve the progress of on-going projects and finally give a more robust, holistic and complete picture of the impacts these important programs have on Appalachian people and their communities.

At the same time RTS was asked by the ARC and the Ford Foundation to take our analysis to a next step and examine how the projects impact not just direct economic success but how they simultaneously positively or negatively impact social and environmental goals as well. This broader perspective, sometimes called *sustainable development* or the *Triple Bottom Line (TBL)* is relevant to the types of economic development projects typically funded by ARC within the tourism program. Consideration of TBL issues is not an explicit element of the ARC 2005-2010 Strategic Plan but is embedded within the strategies that follow from its four main goals.

ARC and the Ford Foundation agreed to informally use these simultaneous research efforts to more fully and systematically look at how the organizations can improve the lives of the people of Appalachia through efforts that build on their mutual commitment to economic, social and environmental progress. This document embeds some of the TBL work completed by the RTS team.

We look to provide analysis and guidance on evaluating projects to meet the needs of ARC and where appropriate suggest ways that evaluation methods can be modified to reflect the broader vision of ARC as reflected in its Strategic Plan. In particular this report looks at the following questions:

- ✚ Is ARC using the best available metrics?
- ✚ Do the metrics tell ARC what it needs to know to evaluate their programs?
- ✚ Are the metrics easily measured and verified?
- ✚ Do the metrics and evaluations assist recipients in managing their projects?
- ✚ Do the metrics and evaluations provide ARC with the documentation required to substantiate funding requests for its programs?
- ✚ What are recommendations to build a new framework for evaluation?
- ✚ What is TBL and what is its potential application to ARC projects?

PROJECT ANALYSIS

The analysis begins with a portfolio of 132 ARC projects within the Tourism, Cultural Heritage and Natural Asset-Related program. Total project costs were \$28.8 million of which ARC provided \$10.8 million. Reported actual outcomes included 583 job created, 520 jobs retained and 55 new businesses created. The projects were spread amongst all the ARC states.

We analyzed the projects using three main techniques:

- ✚ Two separate surveys: We sent surveys to project managers on two separate occasions. The first on-line survey primarily addressed qualitative metrics while the second survey measured specific results (outputs) and outcomes of the project, as well as impacts across the triple bottom line. The first survey had a response rate of 51 percent while the second had a response rate of 60 percent.
- ✚ Interviews: The project team interviewed representatives from 32 projects. These included both project managers and community “stakeholders.” During the process 93 (32 project managers and 61 stakeholders) individuals were interviewed.
- ✚ Case Studies: For a selection of the projects, project staff conducted detailed case studies. These included site visits to project locations and interviews with both project representatives and community stakeholders.

Survey Results

First Survey

Our initial survey of project managers found a high degree of satisfaction with their projects. Over 86 percent felt that their project had mostly or completely met its goals and two-thirds reported that the project was still significantly in place and use (Figures ES-1 and ES-2).

Figure ES-1. To what extent did the project achieve its goals?

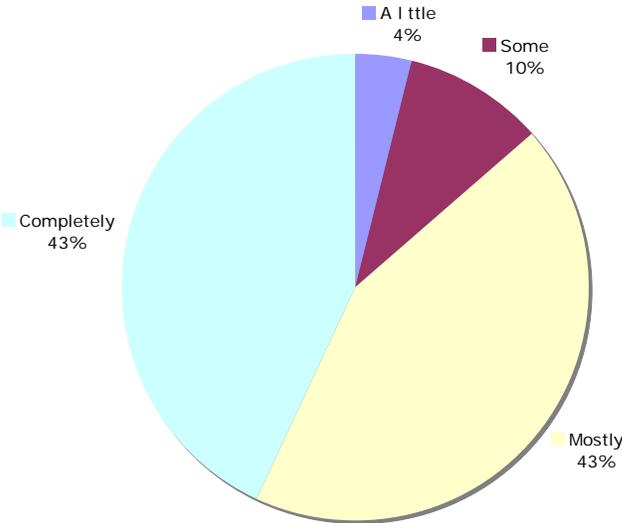
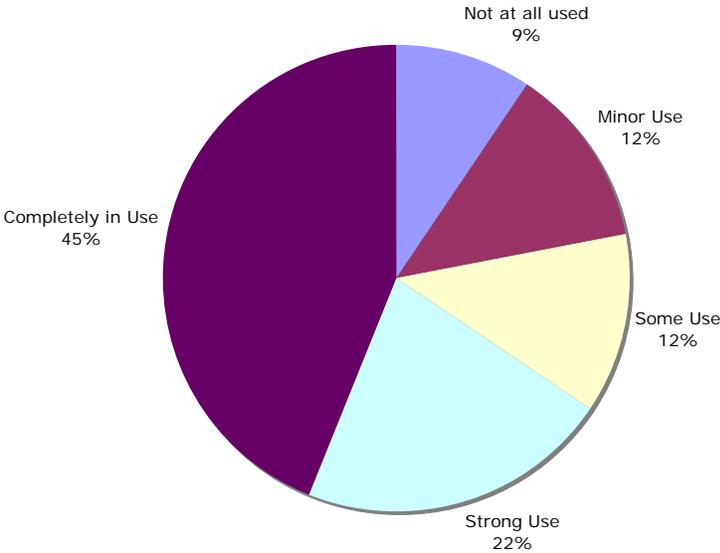


Figure ES-2. To What Extent are the Initiatives in Use?



The greatest service improvements reported on the survey were to 1) tourism attractions, 2) cultural facilities, 3) visitor facilities, 4) small business support and 5) education and training (Figure ES-3). These projects and their services in turn had the most significant impacts on 1) preservation of cultural heritage, 2) tourism revenues, 3) employment, 4) visual landscape and 5) sales of local goods (Figure ES-4).

The survey, for the most part reflected limited impacts to non-economic TBL measures with the exceptions of cultural issues and preservation or improvement of natural and built environments such as visual landscapes.

Second Survey

The primary purpose of the second survey was to measure specific results – outputs and outcomes of the project. Outputs focused on the numbers of individuals, businesses and communities served through the project, the amount of additional funds leveraged by the project, any materials developed through the project, and any programs and plans developed. Outcomes focused more on quantifiable measures of project success e.g. jobs created and retained, businesses improved, communities improved, etc. In all cases, project managers were asked to assign a number value to the project’s impact

Table ES-1 presents the survey results and, where available, comparable data from the ARC project database for *outputs*. The “Reported on Survey” column refers to actual estimated impacts within the categories provided by respondents for their projects. The “Projected Outputs” column refers to the projected outputs for the same projects from the ARC database. We used *projected* instead of *actual* data reported for two reasons. First the *actual* number is provided at project closeout and therefore does not reflect the “three years once the ARC-funded services are delivered or the project is completed.”

Table ES-1. What specific results (outputs) were actually achieved by this project?

| Outputs Category | Reported on Survey | Projected Outputs | Ratio Reported to Projected |
|---------------------------------|---------------------------|--------------------------|------------------------------------|
| Participants Served | 1,322,520 | 89,591 | 14.8 |
| Businesses Served | 2,790 | 2,664 | 1.0 |
| Nonprofit Entities Served | 892 | NA | NA |
| Public Agencies Served | 141 | NA | NA |
| Communities Served | 880 | NA | NA |
| Visitor Attractions Developed | 346 | NA | NA |
| Programs and Plans Developed | 474 | 31* | 15.3 |
| Meetings and Events Held | 1,236 | NA | NA |
| Promotional Materials Developed | 1,405,918 | NA | NA |

* - Total of "New Programs Developed" and "New Strategic Planned Developed"

NA -- Information not available in ARC project database

Second, it is important to compare the actual numbers to the projections to start to understand whether projects are successful and whether project developers have the expertise and ability to estimate impacts and track actual results. The results from the first survey, our interviews, and the case studies suggest that project managers are concerned about their ability to project and track project impacts.

As reflected in Table ES-1 the 69 projects reflected in the survey demonstrate substantial impacts with the regions they serve. The survey reflects that the projects served many more participants and generated substantially more programs and plans than projected. While this reflects respondents' experience it is likely that the definitions that were used in the original proposals were not the same ones that the respondents used for the survey. This is an important result as it provides more evidence that grantees do not have robust or consistent understanding of the measures that ARC focuses on. Unless everyone is "on the same page" it is unlikely that reported results can be meaningfully compared to the original projections.

The "Ratio Reported to Projected" can provide an effective and succinct measure of project effectiveness if the definitions used are consistent. In the three instances where survey output answers can be compared to the ARC database, two categories, "participants served" and "programs and plans developed", likely reflect definitional inconsistency. It is unreasonable to expect that the projects will serve, for example, 15 times more participants than projected. For "Businesses Served" the ratio suggests that the project leaders were able to make reasonable estimates of this measure and deliver outputs.

Table ES-2. Who actually benefited from this project? What results were actually achieved?

| Outcomes Category | Reported on Survey | Projected Outcomes | Ratio Reported to Projected |
|------------------------------|--------------------|--------------------|-----------------------------|
| Participants Improved | 363,594 | NA | NA |
| Businesses Improved | 872 | NA | NA |
| Nonprofit Services Improved | 190 | NA | NA |
| Public Services Improved | 111 | NA | NA |
| Communities Improved | 502 | NA | NA |
| Leveraged Private Investment | \$19,343,116 | \$47,511,751 | 0.4* |
| Jobs Created | 1,257 | 1,783 | 0.7 |
| Jobs Retained | 512 | 306 | 1.7 |
| Businesses Created | 110 | 39 | 2.8 |
| Businesses Retained | 106 | NA | NA |
| Business Sales Increased | \$7,962,073 | NA | NA |

NA -- Information not available in ARC project database

* Removing a questionable \$30 million leveraged investment projection in a single project results in a ratio of 1.1.

The survey reflects that the projects had substantial positive impacts (outcomes) within the communities they served. For example, from Table ES-1 we see that 2,790 businesses were served (a specific output) in some fashion and that output was a factor in improving 872 businesses (a specific outcome). The survey results for jobs created and retained and businesses created indicates that while these measures are fairly obvious and well understood the ability to project the impacts is not a trivial effort.

In addition to the output and outcome measures, the second survey asked each grant recipient to rate their projects impact on their communities' economic health, on issues of economic competitiveness, on social issues and on the environment. For each category, project managers were asked to state their project's impact on a scale ranging from very negative to very positive. Significantly, on no category did recipients rate their impact as either negative or very negative.

Survey respondents indicated the greatest economic impact coming in three main outputs: Business assets/revenues, public assets/revenues and employment, with all three of these indicators having 67 or 68 percent of respondents showing a positive or very positive impact. Table ES-3 shows the respondents' estimate of economic impact of their projects.

Table ES-3: On a scale from very negative to very positive, how would you rate the impact of your project on the following economic, competitiveness, social and environmental measures?

| Answer Options | Very negative | Negative | Neutral | Positive | Very Positive |
|---|---------------|----------|---------|----------|---------------|
| Population | 0.0% | 0.0% | 56.1% | 30.3% | 13.6% |
| Employment | 0.0% | 0.0% | 31.8% | 57.6% | 10.6% |
| Personal income | 0.0% | 0.0% | 50.0% | 40.9% | 9.1% |
| Household assets/ wealth | 0.0% | 0.0% | 69.7% | 24.2% | 6.1% |
| Business assets/ revenues | 0.0% | 0.0% | 31.8% | 56.1% | 12.1% |
| Public assets/ revenues | 0.0% | 0.0% | 33.3% | 50.0% | 16.7% |
| Job Stability | 0.0% | 0.0% | 50% | 43.9% | 6.1% |
| Efficiency | 0.0% | 0.0% | 51.5% | 34.8% | 13.6% |
| Productivity of land, labor, energy or capital | 0.0% | 0.0% | 57.6% | 31.8% | 10.6% |
| Access to markets | 0.0% | 0.0% | 50.0% | 28.8% | 21.2% |
| Civic life and governance | 0.0% | 0.0% | 43.9% | 36.4% | 19.7% |
| Health | 0.0% | 0.0% | 65.2% | 25.8% | 9.1% |
| Education | 0.0% | 0.0% | 28.8% | 43.9% | 27.3% |
| Public safety and access | 0.0% | 0.0% | 71.2% | 19.7% | 9.1% |
| Culture, arts, other amenities | 0.0% | 0.0% | 16.7% | 36.4% | 47.0% |
| Public services | 0.0% | 0.0% | 57.6% | 30.3% | 12.1% |
| Other community assets | 0.0% | 0.0% | 19.7% | 48.5% | 31.8% |
| Air & water quality | 0.0% | 0.0% | 78.8% | 13.6% | 7.6% |
| Land and natural resources | 0.0% | 0.0% | 47.0% | 31.8% | 21.2% |
| Recreational opportunities | 0.0% | 0.0% | 31.8% | 25.8% | 42.4% |

Respondents were also asked to estimate the impact their project on various indicators of a region’s competitiveness, including job stability; efficiency; productivity of land, labor, energy or capital; and, access to markets. In this set of indicators, the responses tended to be more ambiguous, with more than half stating that their project had a neutral impact in each of the four indicators. Increased access to markets had the most positive response, with 21% stating that their project had a very positive impact on the region’s access to markets.

The social measures most positively impacted by the ARC-funded projects tended to be ones in which the increase was an explicit goal. Thus, the fact that 83% of respondents

indicated that they there was a positive impact on culture, arts and other amenities is likely due to the fact that so many projects focused on expanding those very offerings. Similarly, many of the funded projects focused on expanding educational offerings through enhanced training or programs, making the 72% who pointed to a positive or very positive impact on education a more likely result.

The respondents were asked to gauge their impact on a set of environmental indicators. In terms of air and water quality, the fact that none of the respondents believed that their project had a negative impact on the environment is impressive. Since hardly any of the projects had explicit environmental focuses, it is not surprising that the vast majority of respondents thought their project had at best neutral environmental impacts. The indicator in which most respondents assigned a positive or very positive impact was on expansion of recreational opportunities.

Interview Results

As noted above, the RTS team conducted interviews for 32 projects including 32 project managers or directors and 61 stakeholders who saw impacts from their perspective.

The interviews reveal a positive and optimistic attitude about projects, despite having to deal with numerous challenges. Overall, interviews reveal that:

- ✚ The projects would not have been viable without ARC funding and for most the ARC grant started the project;
- ✚ Nearly all project managers reported overall positive relationships with ARC and its staff;
- ✚ A significant number reported that the “jobs created” measure was insufficient to measure the true impact of the project;
- ✚ Some projects acted as a catalyst for environmentally friendly development;
- ✚ Many interviewees reported an improvement in community collaboration; and
- ✚ Most cited that the most difficult challenge or impediment to success had to do with funding

The interviews show that ARC is considered a key partner from both a funding standpoint and as an agency that works with the local grantees in a helpful and respectful way. There were questions raised about cumbersome application and reporting procedures and the inability of the “jobs created” metric to reasonably reflect true project impacts. As one stakeholder remarked, it often seemed that the formula being used was designed for a completely different kind of project.

Lastly, the extensive comments on projects as a catalyst for environmentally friendly development and improvements in community collaboration reflect the role that ARC projects are already serving within the TBL framework.

Figure ES-3. To what extent did the project result in the development, expansion, or enhancement of the following?

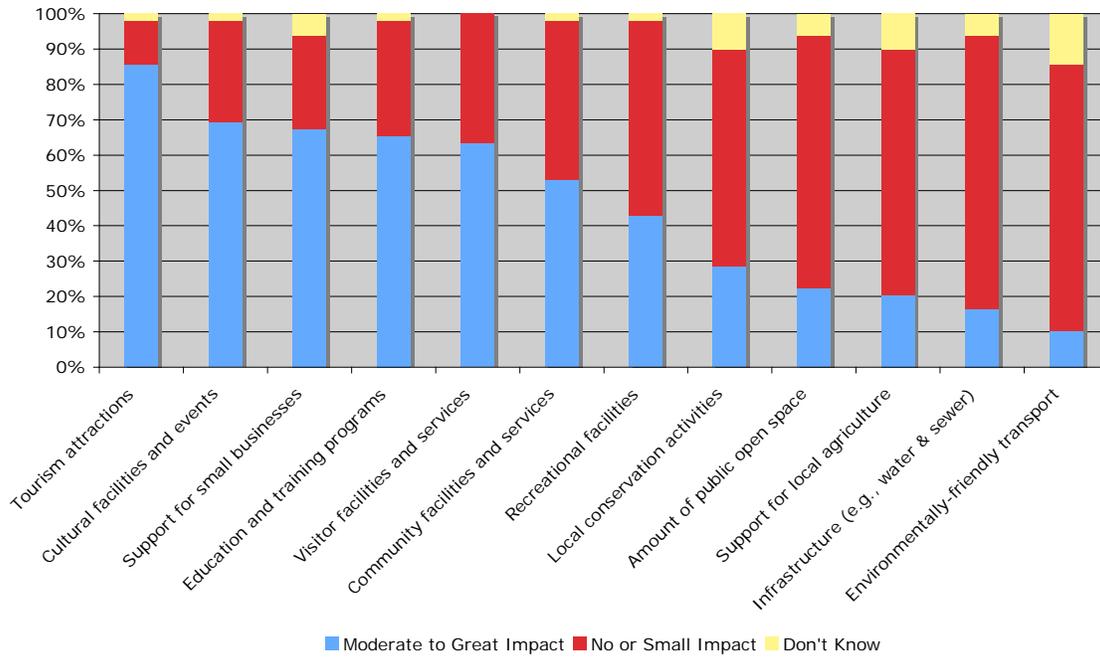
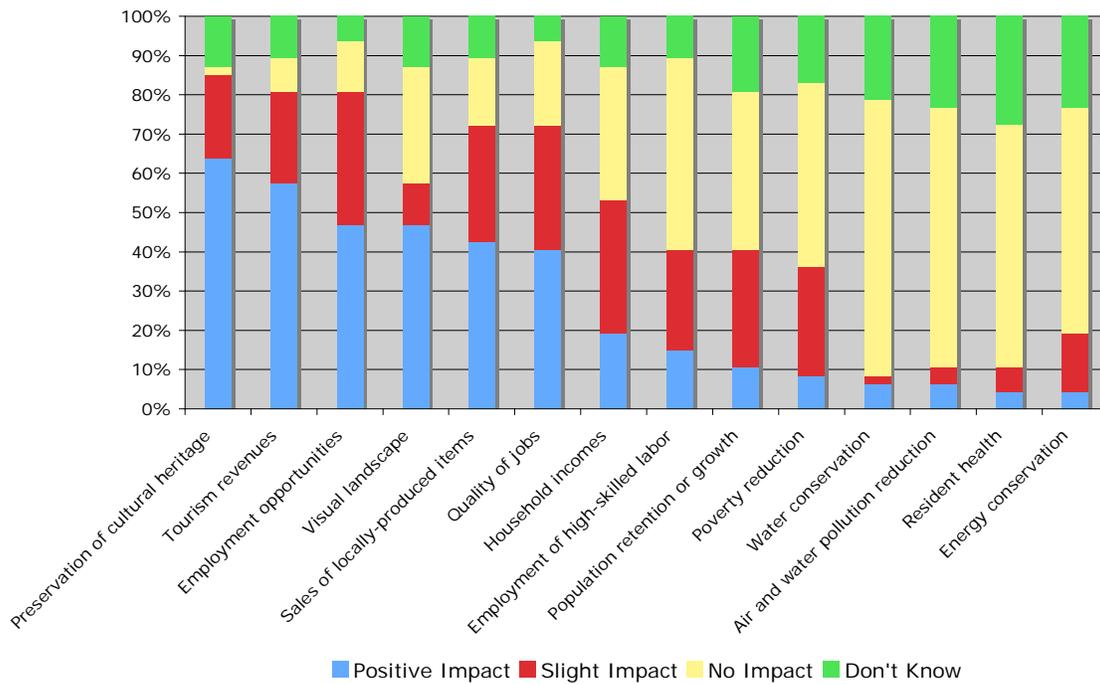


Figure ES-4. What impact did the project have on the following?



Case Study Results

The case studies provide the most nuanced view of the project process. Some of the most thought-provoking impressions include:

- ✦ Projects, by necessity, often evolve from initial conception. Flexibility in project implementation based on changing circumstances has the potential to improve projects and their impacts.
- ✦ The vectors of impact were broader than initially envisioned. Increased collaboration and spin-off projects were among the areas where unforeseen positive were found.
- ✦ Impacts are often difficult to track, estimate and justify. There are a number of reasons for this including technical challenges, lack of grantee expertise in data collection and evaluation, and resource shortages.
- ✦ Local and regional politics and relationships can have significant positive and negative impacts. In some cases, potential partners did not collaborate lessening the potential impact of the project.
- ✦ Project proponents often felt the measured project metrics did not reflect the most important impacts of the project.
- ✦ There are often un-measured spillover and synergy impacts from projects. This is particularly evident in the Crooked Road region of southwest Virginia where the state and ARC have embarked on a strategic series of projects that have helped create a creative cluster.
- ✦ As in the interviews, we were told that many projects had impacts on the social and environmental metrics of TBL even though the projects had not been planned to affect these elements.

Clearly the excellent working relationship between ARC and its grantees bodes well for developing and implementing positive improvements to the evaluation process. This positive and trusting relationship is a platform for positive and collaborative enhancement. Project grantees will be a key element in efforts to improve the evaluation process.

ESTIMATING IMPACTS

The quantitative portion of the second survey combined with the full universe of projects in the ARC database provides a structured method to estimate the overall impacts of the tourism, cultural heritage and natural asset-related portfolio of projects funded by ARC. This survey enabled us to collect data from project managers in a way that mostly avoids the problem of the estimated impacts provided at project closeout. The final report submitted to ARC at the completion of a project is required to estimate “actual” impacts. The estimates are supposed to include impacts going forward three years under the correct assumption that impacts normally take time to occur after a project is completed. The survey strongly suggests that under these circumstances the managers focus more on present conditions, not three years out, and appear to vastly underestimate project impacts.

In our survey, the project managers were able to look back at their projects after more time had elapsed and projects had had a chance to mature and generate impacts within their communities. When we compare the survey estimates which are based on a longer time horizon we find that the estimated impacts are much more consistent with the initial pre-project projections rather than the immediate post closure estimates.

Table ES-2 includes a column that is a ratio of the survey estimates of outcomes compared to the initial projected outcomes from the original proposal for jobs created and retained, businesses created and leveraged private investment. As an example, the survey indicates that the surveyed projects generated 1,257 jobs compared to the initial projection for those projects of 1,783 jobs, generating a ratio of 0.7. The proposals appear to have somewhat overestimated the ultimate job impacts. For jobs retained the survey estimate of 512 is higher than the original projection of 306, generating a ratio of 1.7 suggesting that the original projections underestimated the ultimate impacts.

Assuming that the 69 projects for which surveys were completed are representative of the full universe of 132 projects allows us to generate estimates of impacts for the full universe using the estimated ratios.

Table ES-4 displays the generated estimates of impacts from the ARC portfolio of tourism, cultural heritage, and natural resource-related projects.

Table ES-4 Estimated Impacts of the Universe of ARC Tourism Projects

| Impact Category | Initial Projection of Impacts | Survey-based Adjustment Ratio | Estimated Post Project Impacts | Estimated Units Impacts of ARC Funding |
|------------------------------|-------------------------------|-------------------------------|--------------------------------|--|
| Jobs Created | 3,671 | 0.70 | 2,588 | \$4,161 |
| Jobs Retained | 5,616 | 1.67 | 9,397 | \$1,146 |
| Leveraged Private Investment | \$65,575,691 | 0.41 | \$26,697,357 | \$0.40 |
| New Businesses Created | 165 | 2.82 | 465 | \$23,139 |
| Businesses Served | 7,148 | 1.05 | 7,486 | \$1,438 |

The *Initial Projection of Impacts* column is the sum of the original projections from the proposals submitted to ARC as reflected in the ARC provided database. The *Estimated Post Project Impacts* column adjusts the projected impacts based on the ratios estimated from the survey results. So, for example, applying the 0.7 ratio we estimated to the original projection for job creation gives us an estimate of 2,588 jobs created by the 132 projects examined in this project.

The *Estimated Unit Impacts of ARC Funding* column shows that a new job was created in the community for every \$4,161 of ARC-provided dollars. A new business was created

for every \$23,139 in ARC funding. For every \$0.40 invested by ARC in the projects, \$1.00 of leveraged private investment occurred.

REFINING AND IMPROVING METRICS

The tourism, cultural heritage and natural asset-related projects included in this evaluation primarily address Goal 1 of ARC's 2005-2010 strategic plan – to “increase job opportunities and per capita income in Appalachia to reach parity with the nation.” ARC uses two measures to assess the outcomes of projects funded to achieve this goal. The primary measure is number of jobs created and retained and the secondary measure is leveraged private investment (LPI).

ARC has developed very specific definitions of each of these measures, as described in its Fiscal Year 2006 Performance and Accountability Report:

- ✦ **“Jobs created”** includes direct hires that will be made as a result of the project's operation. Also included are private-sector jobs that will be created within three years after project completion.
- ✦ **“Jobs retained”** refers to the number of workers enrolled in specific training programs or to the number of jobs at businesses that will be retained because of an investment that makes the companies more competitive.
- ✦ **“Leveraged private investment”** represents private-sector, non-project financial commitments that follow and are the result of the completion of an ARC-supported project or the delivery of services under an ARC-supported project.

It is clear that job creation and retention are fundamental to ARC's mission and that the commission's congressional overseers assess its performance largely on this basis. As it stands the present system's methodology provides insufficient means for grantees to accurately measure job impacts. In fact, as it stands now, grantee reporting provides little useful information about employment impacts and does not permit ARC to develop meaningful estimates of the overall employment impacts of this group of projects.

Current problems

ARC's tourism, cultural heritage and natural asset-related projects typically seek to achieve one or both of two direct outcomes:

- ✦ Increase visitation and tourism revenues
- ✦ Increase sales of locally produced products

These outcomes can lead to job creation/retention and additional private investment. Measuring these employment and investment impacts requires two steps. First, accurate data must be obtained on the amount of tourism revenues or business sales generated. Second, methods must be employed whereby estimates of the impacts of increases in tourism revenues and business sales on employment and private investment can be developed.

Examination of data reporting methods for the projects included in this evaluation uncovered a number of problems that prevent ARC from obtaining accurate and complete data on jobs and private investment.

➤ **Methods Used by Grantees to Document Employment Impacts are Inconsistent and Often Methodologically Unsound**

For *tourism projects* well-established methods exist to measure the economic impacts of tourism projects. These involve a three-step process. First, mechanisms are put in place to track the number of visitors to tourism attractions. Second, surveys are conducted to ascertain the role played by the marketing of attractions and the resulting amount of visitor spending that occurs. Third, economic models are used to estimate the impact of increased visitor spending on local income and full-time equivalent (FTE) employment.

ARC tourism grantees do not, by and large, employ these methods. Some do not report employment impacts at all, but use proxies such as increased visitation to tourism attractions. Some measure employment impacts using other methods. Depending on method, they can lead to systematic over- or under-estimation of impacts. In addition this haphazard approach makes it difficult for ARC to compare impacts across projects.

Adopting established methods for economic impact analysis of tourism projects, while adding complexity and cost to the outcome reporting process, could at least partly address these problems.

➤ **There is No Practical Way to Measure Leveraged Private Investment (LPI) for Most Projects**

In some cases, private investment leveraged by an ARC-funded project can be identified and measured. Even in these cases, however, methodological issues arise, for example, on purchasing versus leasing and on how to handle working capital.

Since leveraged private investment is essentially used to generate job impacts, a preferred method would be to skip the LPI and move directly to estimating jobs impacts. An impact assessment methodology that fully captured employment impacts would obviate the need to measure LPI. If additional local sales generated by ARC-funded projects could be estimated in a reasonably accurate manner, applying economic impact models as could provide a better picture of impacts.

➤ **The Project Reporting Time Frame is Too Short to Fully Capture Employment Impacts**

Most of the outcome data received by ARC from grantees is through the final report, which is submitted within 30 days of the end of the project and in most cases before significant employment impacts have occurred. At best, the reports can inform ARC about the extent of project activity completion. Perhaps the most consistent frustration

voiced by project managers was that the employment impacts occur after the project is complete. While ARC staff conducts validation visits for a small number of projects two or three years after project close-out, the sample is far too small to draw any inferences about the longer-term employment impacts of these projects.

Instituting post-project reporting requirements could at least partly address this problem, although at additional cost to grantees. Even then the methodological issues for grantees would be formidable.

➤ **Impacts of Many ARC-funded Tourism Projects Cannot be Easily Isolated from Other Factors Influencing Visitation and Visitor Spending**

Additional tourism spending can be more easily attributable to some, typically larger, ARC tourism projects than others. Established impact analysis methods can estimate the impacts of these types of projects if the appropriate visitation and spending data are collected. We refer to these as “*tourism generators*.”

However, there are many other, typically small, ARC projects that, while contributors to an area’s tourism development, can’t easily be linked to additional visitor spending. Methods could be employed to track these smaller projects but it would be difficult to accurately assess their role in increasing overall visitor spending. These projects are more accurately described as “*tourism contributors*.”

RECOMMENDATIONS FOR A NEW FRAMEWORK FOR MEASURING EMPLOYMENT IMPACTS

These issues suggest that ARC should develop a new framework for measuring the employment impacts of its project portfolio. They also suggest that a number of criteria should be applied in establishing this recommended framework:

- ✚ Methods employed should be reasonably reliable and consistent.
- ✚ They should be designed to ensure that the impacts measured are attributable to the ARC project.
- ✚ They should be made as easy as possible to execute and proportionate to the grantee’s resources and the cost of the project.
- ✚ They should be tailored to the project type and stage of development.

➤ **Establish Standardized Practices to Assist Grantees with Impact Measurement**

The most appropriate way, as noted above, to measure the employment impacts of ARC’s tourism projects is to first measure increases in local revenues attributable to these projects, and then convert these numbers into employment equivalents using economic impact models. These tools have been used extensively by academic researchers, government tourism agencies, and private consultants. This would require technical and

funding assistance for grantees and preferably the development of an online economic development model that can be directly accessed by the grantees.

➤ **Tailor Measurement Methods to Project Characteristics**

While measurement methods should be standardized, they should also be tailored to take into account different project types and time frames. Most, importantly, the impacts of *implementation projects* should be measured differently than those of *planning projects*.

Another distinction should be made between tourism implementation projects that are “*tourism generators*” and those that are “*tourism contributors*.”

➤ **Require and Assist Applicants to Develop an Employment Impact Measurement Plan**

ARC should require all applicants to prepare an employment impact measurement plan as part of their project application. The plan should describe what impacts will be measured, what methods will be used, when it will be done, and who will be responsible for data collection and analysis. A budget line for impact measurement should be included in the project budget and ARC should be prepared to assist applicants with this process.

➤ **Establish Post-grant Reporting Requirements**

As noted earlier, it is typically premature to measure the employment impacts of this group of projects at the end of the grant period. Final reports should instead focus on reporting outcomes that can serve as preliminary indicators of the nature and extent of employment impacts that might be expected within 1-3 years of project completion.

In order to obtain meaningful information on actual employment impacts, ARC should require, with some incentive mechanism, grantees to submit post-grant reports at specified intervals, perhaps one and three years after project implementation. The three-year reporting interval meshes with ARC’s definition of job creation, which anticipates measurement of private sector jobs created within three years of project completion while the one-year report would be used as a management tool to help with project needed modifications.

AN EX POST FACTO ESTIMATE OF EMPLOYMENT IMPACTS

The project files provided by ARC indicated that the projects (those that are closed) generated 583 jobs. Those projects were initially projected by grantees, as reflected in their grant requests, to create 2,113 jobs. The mass of evidence described in this report suggests that grant recipients cannot be expected to accurately estimate employment impacts and therefore this large differential is not surprising. We endeavored to find an alternative means of estimating the impacts of the project portfolio ex post facto.

Using an analysis of the Crooked Road region of Virginia where ARC has made significant investments we compared reported project impacts to the estimated impacts based on a economic development model like those described above. Our basis was the 2008 study conducted by Sustainable Development Consulting (SDC) and entitled *Economic Impact Assessment of the Crooked Road: Virginia's Heritage Music Trail*.

The study estimated that 445 full-time equivalent (FTE) jobs were created by the Crooked Road initiative. How does this compare to the estimated impacts as reported by ARC grantees for the same portfolio of projects? The grantees reported that their projects generated 80 jobs or 18% of the estimated total reported by SDC. On the other hand the 445 FTE estimate is quite close to the initial projections made by the ARC grantees of 416.

This ratio of grantee job estimates to the economic model estimates provides a means of estimating job impacts of the full portfolio package of ARC tourism projects. Applying this ratio we estimate that the actual job impacts for the ARC portfolio are 3,243, compared to the reported estimate of 583. These results strongly support our recommendation that ARC investigate a practical implementation of an economic impact model to more accurately reflect the success of its investments in Appalachia.

THE TRIPLE BOTTOM LINE DEFINED

The Triple Bottom Line is built on the broader topic of sustainability. Sustainability is defined as “development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” TBL focuses more narrowly on specific activities (by companies, organization, governments, etc.) and their impacts on the economy, society and environment. The economic dimension is generally straightforward but the social and environmental less so.

The Economic Dimension of TBL

Perhaps the easiest dimension to capture during triple bottom line evaluation is the economic dimension – in this case employment, income and investment. Industry-specific measures such as for tourism are also readily available to assess the economic performance of an activity or project.

The Social Dimension of TBL

The social dimension is often thought of in terms of *social capital*. Robert Putnam describes social capital as the “trust, norms and networks needed to facilitate cooperation.” A more robust framework specifies four dimensions of social impact, including an 1) individual's well-being, 2) community well-being, 3) employment experiences and satisfaction, and 4) organizational impact. These are often not easily measured.

The Environmental Dimension of TBL

The environmental dimension is referred to by some as *natural capital*. Natural resources such as air, water, energy, forests, minerals, and soil can be thought of as the “capital” upon which our existence depends. Measuring the environmental dimension can be complicated, time-consuming and expensive.

The potential value of integrating TBL into ARC project planning and evaluation includes cost efficiencies (reduced energy and materials use), better living and work environments, more successful marketing of attractions as “green” and improved stakeholder relations. Also, adopting the TBL approach can improve a tourism development organization’s strategic decision making.

As we note above, project managers easily identified TBL relevant impacts when discussing their projects. This was particularly true for the social dimension.

A MODEL FOR IMPLEMENTING TBL IN ARC PROJECTS

The Conservation Fund’s “Creating Asset-Based Economies in Western North Carolina” project funded by ARC provides an excellent model for implementing TBL within the ARC portfolio. The project provides small grants to community organizations that support “triple bottom line” initiatives building a base of community support for entrepreneurship. The Conservation Fund provides technical assistance to the community organizations on implementing and evaluating their TBL project.

Two features are fundamentally important to the project’s success:

- ✚ It is intentional in nature; organizations must demonstrate that their proposed project integrates TBL as a basic operational goal.
- ✚ The project requires and instills a collaborative, continual training and learning process that integrates evaluation into project design and management.

The technical assistance involves workshops before and during the project. The process itself is taught in the workshops using a straightforward manual that use seven steps to guide the grantees through designing the TBL project, its management and evaluation.

The Conservation Fund program is not the only way to operationalize TBL into organizations receiving grants. It does provide an excellent building block for thinking about next steps for ARC to develop an explicit platform for building Appalachian Triple Bottom Line initiatives. The Conservation Fund program involves a level of handholding, training and workshops that may be unrealistic for an ARC-wide implementation.

We believe a practical program can be built. The skeleton of the process is outlined in the seven steps described in the Conservation Fund’s manual. ARC does not need to be involved in all parts of the process but we recommend two critical elements:

An explicit acknowledgment by ARC of the relevance of TBL

ARC must be upfront in adopting the Strategic Plan's suggestion that project success often goes beyond the traditional measures of employment, income and investment. While these traditional impacts provide the backbone for improving the lives and livelihoods of the people of Appalachia, they do not represent the complete picture.

Within this acknowledgment ARC will need to clearly define the *why* and *how* of the TBL. This might include the development of a series of straightforward background guidance documents or manuals.

Communicating a set of potential impacts and measurement options

The surveys, interviews and case studies we conducted, along with the Conservation Fund project experience, clearly show that grantees implicitly understand that the work they do within Appalachian communities impacts and is impacted by economic, social and environmental circumstances. Most grantees are used to thinking in terms of jobs, income and investment. Not only must they be assured that broader goals are acceptable, but they will need assistance in making the transition to a TBL perspective including defining potential TBL impacts and measurement methods for those impacts.

For details on our analysis and recommendations please refer to the main report.

SECTION 1: INTRODUCTION AND METHODOLOGY

THE SETTING

The Regional Technologies Strategies (RTS) project team, including Mt. Auburn Associates and Appalachian State University, was charged with examining and critiquing the Appalachian Regional Commission's (ARC) investment in Tourism, Cultural Heritage and Natural Asset-Related projects with a specific focus on how those projects were evaluated. The projects were examined within the context of the ARC's Strategic Plan entitled *Moving Appalachia Forward: ARC Strategic Plan, 2005–2010*. The four overarching goals within the plan are:

- ✚ Goal 1: Increase job opportunities and per capita income in Appalachia to reach parity with the nation
- ✚ Goal 2: Strengthen the capacity of the people of Appalachia to compete in the global economy
- ✚ Goal 3: Develop and improve Appalachia's infrastructure to make the Region economically competitive
- ✚ Goal 4: Build the Appalachian Development Highway System to reduce Appalachia's isolation

For this analysis Goals 1, 2 and 3 are most relevant as the Tourism, Cultural Heritage and Natural Asset-Related projects were funded to directly and indirectly improve the ability of ARC residents to build sustainable economic futures based on the heritage, history, beauty and internal entrepreneurial resources of the region. These projects rely on building and rehabilitating facilities and infrastructure to make the region more accessible and attractive to visitors, provide ways and means for residents to build pride and community based on their assets and then market those assets, train crafts people, artisans and artists to improve the quality, markets and marketability of their works and train workers to serve in newly created jobs which the tourism and visitation markets created. Individual projects have specific and perhaps modest goals but the overall impact of the program is to be a key component in helping bring Appalachia and its mostly rural residents into the mainstream of US economic progress.

We were asked to look at the portfolio of funded projects, how they were evaluated under ARC guidelines, and examine the projects' reported impacts including the key metrics of jobs created and retained, businesses created, and leveraged private investment that are important in ARC's reporting to the Office of Management and Budget (OMB). We examined the impact estimates and applied ARC data provided in combination with two surveys of project managers we developed reasonable estimates of the impact of the project portfolio on jobs, businesses, leveraged private investment and other parameters of interest. From there we examined how well the evaluation guidelines helped grant recipients *tell the story* of the projects' successes and failures and whether the evaluation systems and reports provided ARC staff (both state and federal) with the information and guidance they need to effectively plan and evaluate their programs. From this baseline we then considered ways in which the evaluation procedures and rules could be modified

to help both the grant recipients and ARC improve the evaluation, use evaluation to improve the progress of on-going projects and finally give a more robust, holistic and complete picture of the impacts these important programs have on Appalachian people and their communities.

At the same time RTS was granted funds by the Ford Foundation to take our analysis to a key next step and examine how the projects reflect and impact the increasing interest in looking at these efforts from a perspective that includes not just direct economic development but how they simultaneously positively or negatively impact social and environmental goals as well. This broader perspective, sometimes called *sustainable development* and within this report referred to as the *Triple Bottom Line (TBL)* for economic, social and environmental impact can be applied to the types of economic development projects typically funded by ARC. The application of TBL to ARC projects is developed in Sections 5-8 below and includes recommended steps if ARC adopts the TBL framework.

Consideration of TBL issues is not an explicit element of the ARC 2005-2010 Strategic Plan but is embedded within the strategies that follow from the four main goals and are documented within the Strategic Plan document. The full plan is available online at <http://www.arc.gov/index.do?nodeId=2296>.

For example, the strategies within Goal 1 on increasing job opportunities and incomes begin with a strong focus on *Civic Entrepreneurship*, a key component in the social focus of TBL with its emphasis on leadership, collaboration and citizen involvement. Other strategies suggest a focus on using and protecting the historic and environmental assets to build long-term economic success. Strategies within the Goal 2 on global competitiveness speak to the need to improve childcare, education, health care and healthy lifestyles as ways to make the region more competitive but also to strengthen the social fabric as workers build skills and productivity. Goal 3 strategies to build infrastructure improvements include efforts to protect the land and water from environmental degradation.

ARC and the Ford Foundation agreed to informally use these simultaneous research efforts to more fully and systematically look at how the organizations can improve the lives of the people of Appalachia through efforts that build on their mutual commitment to economic, social and environmental progress. This document embeds much of the TBL work completed by the RTS team.

We look to provide analysis and guidance on evaluating projects to meet the needs of ARC and, where appropriate, suggest ways that evaluation methods can be modified to reflect the broader vision of ARC as reflected in its Strategic Plan. In particular this report looks at the following questions:

- ✚ Is ARC using the best available metrics?
- ✚ Do the metrics tell ARC what it needs to know to evaluate their programs?
- ✚ Are the metrics easily measured and verified?

- ✦ Do the metrics and evaluations assist recipients in managing their projects?
- ✦ Do the metrics and evaluations provide ARC with the documentation required to substantiate funding requests for its programs?
- ✦ Recommendations to build a new framework for evaluation
- ✦ TBL and its potential application to ARC projects

REPORT STRUCTURE AND METHODOLOGY

ARC provided the RTS team with an initial universe of 212 projects that were available to review and evaluate. However, ARC trimmed that project list further if the project had been analyzed as a part of a recent entrepreneurial evaluation effort. In the course of the evaluation and in discussion between the team and ARC staff the project list was reduced further:

- ✦ We removed projects from earlier than 2000. Problems were foreseen with evaluating older projects, as individuals with knowledge of the projects were likely to have moved on.
- ✦ We did not consider projects funded after 2006 because they were likely to be too early in project development for realistic evaluation.
- ✦ “Minor” projects, such as those that funded attendance at an offsite workshop or conference, were not considered.

These decisions left the project team with a universe of 132 projects to evaluate.

To gather information about the projects, the team employed three main techniques:

- ✦ Surveys: two on-line surveys were sent to project managers. If the project manager was no longer with the organization, then other knowledgeable individuals were encouraged to complete the survey. In some early project cases we could not identify a suitable individual to take the survey. For the initial survey 98 surveys were sent (through electronic means) and 51 were completed, for a response rate of 52 percent. For the second survey 114 surveys were sent (through electronic means) and 69 were completed, for a response rate of 60 percent. The survey instruments are included as Appendix B and summary analyses of the surveys can be found in Appendix D.
- ✦ Interviews: The project team interviewed representatives from 32 projects. These included both project managers and community “stakeholders.” These stakeholders represent local businesses or organizations whose operations were impacted by the funded projects. During the process 93 (32 project managers and 61 stakeholders) individuals were interviewed. (The original interviews are provided as a separate document.) The RTS team also interviewed relevant ARC staff at the Washington D.C. headquarters building. The interview protocols for project managers and stakeholders are included in Appendix D.
- ✦ Case Studies: For a selection of the projects, project staff conducted detailed case studies. These included site visits to project locations and interviews with both

project representatives and community stakeholders. The case studies are included in Appendix E.

In addition to this detailed analysis of funded projects, the team also conducted significant research on the ways in which tourism projects have been traditionally evaluated and how the triple bottom line approach can be used to evaluate these types of projects. Accordingly, two literature reviews were commissioned with experts within the field, both of which are included as appendices F and G.

The project team used the services of an advisory board of experts in the fields of rural economic development and evaluation to guide its work. The Advisory Board, whose membership is listed in Appendix A, met twice for two-day meetings in North Carolina, where they provided invaluable input on a wide range of project-related subjects. In addition, individual members of the Panel reviewed materials during the course of the project providing important feedback to project staff.

This report includes the following sections:

- ✚ This introduction and description of methodology
- ✚ A general summary of the projects included in the analysis including surveys results and interview and case study learnings
- ✚ Estimates of key performance measures for the portfolio of projects examined
- ✚ An analysis of the metrics and recommendations on the future direction
- ✚ A robust background and evaluation on the TBL and a proposed application to ARC projects
- ✚ The series of supporting appendices

SECTION 2: PROJECT DATA AND ANALYSIS

CHARACTERISTICS OF PROJECTS FROM ARC FILES

To choose and analyze the ARC tourism, cultural heritage and natural asset-related projects the RTS project team was provided with:

- ✚ An electronic spreadsheet with project data from the ARC project database of all projects funded within the program
- ✚ Project files for those projects that were ultimately included in the analysis. The project files had varying levels of detail.

Some basic characteristics of the 132 projects as determined from the project database:

- ✚ The database included 72 closed and 60 open projects. As noted in Section 1, open projects were begun before 2007.
- ✚ Project sponsorship (Figure 1) was:
 - Commission sponsored: 35
 - Alabama: 6
 - Georgia: 5
 - Kentucky: 6
 - Maryland: 7
 - Mississippi: 3
 - New York: 6
 - North Carolina: 8
 - Ohio: 11
 - Pennsylvania: 7
 - Tennessee: 2
 - Virginia: 29
 - West Virginia: 7
- ✚ Total project costs were \$28.8 million of which ARC provided \$10.8 million.
- ✚ The database includes initial projections and actual *outcomes* (for completed projects) on the key parameters that ARC uses in evaluating projects and reporting program results to the Office of Management and Budget. The key outcome indicators (projected and actual) include numbers of jobs created and retained, non-project private investment generated by the project (referred to as leveraged private investment), and new businesses created.
- ✚ The database also includes initial projections and actual *outputs* (for completed projects). Outputs are activities that can lead to positive impacts. Outcome indicators (projected and actual) include people served (e.g. students or trainees), businesses served or assisted and programs or plans created.
- ✚ Other outcomes that were sometimes but inconsistently reported include:
 - Numbers of visitors
 - Seasonal jobs
 - Documents (brochures, guides) produced

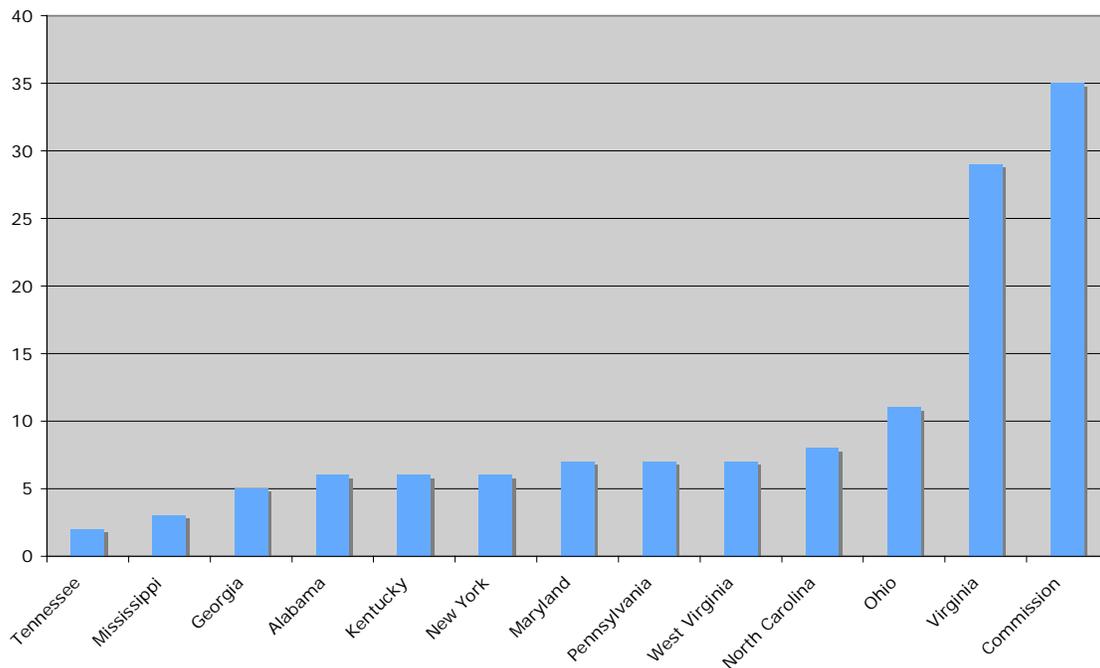
- Artists and businesses served
- Training provided
- Workshops held
- Websites created
- Trails created

The following listing totals the reported actual and projected key performance outcomes and the ARC and total funding of projects from all 132 projects in the ARC provided database:

| Category | Measure |
|--|--------------|
| ARC Funding | \$10,768,574 |
| Total project funding all sources* | \$28,790,654 |
| Total jobs created actual | 682 |
| Total jobs created projected | 3,671 |
| Total jobs retained actual | 520 |
| Total jobs retained projected | 5,616 |
| Total new businesses created actual | 55 |
| Total new businesses created projected | 165 |
| Leverage Private Investment actual | \$926,200 |
| Leverage Private Investment projected | \$65,575,691 |

* Includes ARC, local, other Federal, and state funding

Figure 1. Projects by State



The project spreadsheet, while a good starting point, does not provide sufficient or consistent data that can realistically provide the data needed to judge evaluation. The project files provide a more consistent source of records such as ARC documentation, correspondence, and progress and final reports. Nevertheless, the project files have vastly different levels of detail. Grantee reports occasionally provide substantive levels of detail and critical information useful in in-depth evaluation but more often the reports fulfill the requirements but do not give a substantive basis on which to judge projects.

ONLINE SURVEY RESULTS

The realization of the inadequacy of the internal records and files was a key concern for ARC and a fundamental rationale for conducting this research project. To supplement the file data, RTS used a variety of methods for collecting information on impacts as described in Section 1 of this report. Most of the data are qualitative in nature but the two online surveys, completed by grantee project managers (or sometimes an individual in the grantee organization more knowledgeable about the project) do provide valuable quantitative data. The survey instruments are shown in Appendix B and summaries of results are shown in Appendix C. As noted above the initial survey focused on categorical qualitative answers while the second also delved into quantitative estimates of specific outputs and outcomes from projects.

To assess the impacts of tourism and asset-building projects, RTS developed and distributed two surveys to project managers from the universe of selected projects. The purpose of the surveys was to measure the impact of the projects across a wide range of categories, using both qualitative and quantitative measures.

Universe of selected projects: In consultation with ARC staff, RTS created a suitable database of projects falling in the category of tourism and asset-building projects, with closing dates from the period 2000 to the present. To ensure that the survey gained the most valuable information possible, the following two types of projects were eliminated from the survey:

- *Projects whose impacts had been evaluated in prior ARC studies.* Primarily, these projects were ones addressed in a previous evaluation of entrepreneurial related programs. ARC staff designated those that should not be included in the final survey.
- *Projects whose sole purpose was the creation of a strategic plan.* While planning for such activities as building a conference center or developing a marketing plan are inherently valuable, the impacts generally come directly from implementation rather than the creation of a plan. It was felt that inclusion of these projects would skew the impacts unnecessarily.

Process of collection: The surveys were created using the online survey tool of surveymonkey.com. An introductory email was sent to all listed project managers on file with the ARC. If emails showed a failure to delivery, contact was made with the

organization that received the information to obtain updated contact information. If the project manager was no longer with the organization, then other knowledgeable individuals were encouraged to complete the survey. In some early project cases we could not identify a suitable individual to take the survey. In all cases, survey respondents were contacted several times both by phone and electronically to encourage their participation in the survey. Each project was contacted a minimum of three times, if contact information was available.

➤ **First Survey**

The initial survey focused on qualitative impressions about the projects. Of the 98 surveys sent (through electronic means), 51 were completed, for a response rate of 52 percent. To insure confidentiality the surveys did not ask for identifying information such as name of the respondent or the project name or number.

Purpose and structure of the first survey: The survey served three main purposes.

1) *To determine if project managers believed that the projects had been successful and met their goals:* Respondents were asked about overall success in meeting goals and in what ways the project had positively impacted the communities it served. Specific questions were asked about whether the project resulted in the development, expansion, or enhancement of infrastructure and programs and the ways the projects had affected the economic success of the communities. Respondents used a scale ranging from “not at all” to “a great deal” to categorize the impacts for the various impact areas.

2) *To measure impact across the Triple Bottom Line:* Project managers were asked to estimate their project’s impact across a range of economic, social and environmental measures some of which specifically address TBL. Project managers used a scale ranging from “not at all” to “a great deal” to categorize the impacts for the various categories.

3) *To discuss evaluation measures:* Respondents were asked to discuss how they evaluated their projects and whether additional funding would have allowed them improve their evaluation.

Respondents were mostly very satisfied with the success of their projects and their outcomes. On a scale of 1 to 5, with 1 being “Not at all” and 5 being “Completely,” 86% considered that the project mostly (4) or completely (5) achieved its goals (Figure 2). A strong majority (86.5%) reported that new initiatives, whether a program or organization, information delivery or facility, had mostly or completely been created as a result of the project. Most projects were reported to still be in place and in use (Figure 3).

When asked about the impacts of the projects, most respondents reported moderate to strong impacts on tourism-related items: new tourism, cultural and visitor facilities (Table 1 and Figure 4). This is unsurprising given the goals of the projects. Recreation facilities, small business and entrepreneurial support, education and training and recreation development were also significant.

Lesser impacts were reported from the standpoint of the Triple Bottom Line perspective. Few projects generated facilities or enhancements in conservation, environmental infrastructure, open space, and water or energy conservation (Table 2 and Figure 5). Within the social realm, the projects have minimal impacts on poverty or health. These results are understandable and explained by two factors: project design did not include or consider environmental or social features; and ARC has other funding programs specifically targeted to infrastructure and other environmental issues.

Open-ended questions on project impact measurement issues revealed that many recipients relied on very informal or anecdotal measures of impacts. Lack of resources to track impacts was commonly mentioned – surveys, focus groups and mechanisms were suggested if resources were available. Some respondents expressed regret that evaluation had not been planned earlier in the process. Other respondents noted that it is too early to see the ultimate impacts.

Figure 2. To what extent did the project achieve its goals?

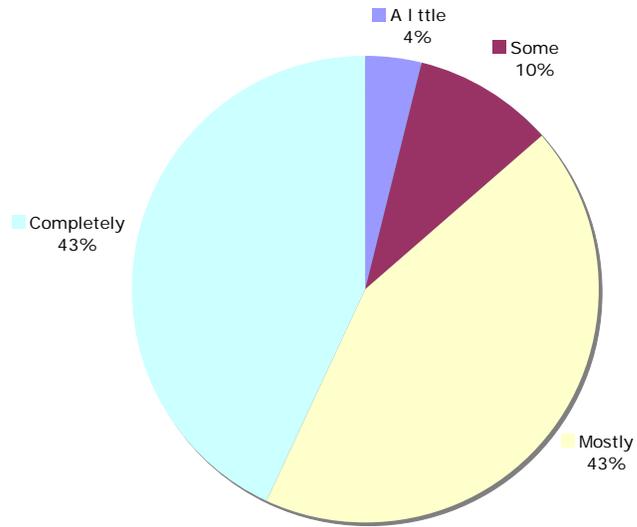


Figure 3. To What Extent are the Initiatives in Use?

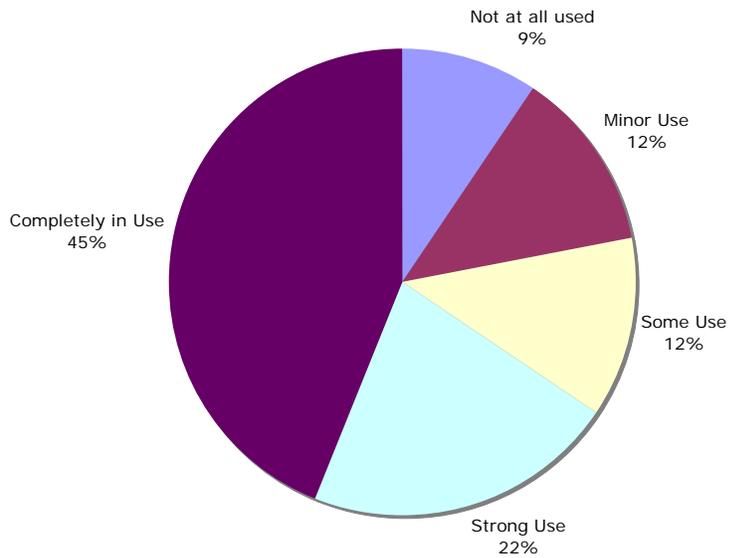


Table 1. To what extent did the project result in the development, expansion, or enhancement of the following?

| Project Impacts | Moderate to Great Impact | No or Small Impact | Don't Know |
|--------------------------------------|--------------------------|--------------------|------------|
| Tourism attractions | 86% | 12% | 2% |
| Cultural facilities and events | 69% | 29% | 2% |
| Support for small businesses | 67% | 27% | 6% |
| Education and training programs | 65% | 33% | 2% |
| Visitor facilities and services | 63% | 37% | 0% |
| Community facilities and services | 53% | 45% | 2% |
| Recreational facilities | 43% | 55% | 2% |
| Local conservation activities | 29% | 61% | 10% |
| Amount of public open space | 22% | 71% | 6% |
| Support for local agriculture | 20% | 69% | 10% |
| Infrastructure (e.g., water & sewer) | 16% | 78% | 6% |
| Environmentally-friendly transport | 10% | 76% | 14% |

Table 2. What impact did the project have on the following?

| Impact Category | Positive Impact | Slight Impact | No Impact | Don't Know |
|-----------------------------------|-----------------|---------------|-----------|------------|
| Preservation of cultural heritage | 64% | 21% | 2% | 13% |
| Tourism revenues | 57% | 23% | 9% | 11% |
| Employment opportunities | 47% | 34% | 13% | 6% |
| Visual landscape | 47% | 11% | 30% | 13% |
| Sales of locally-produced items | 43% | 30% | 17% | 11% |
| Quality of jobs | 40% | 32% | 21% | 6% |
| Household incomes | 19% | 34% | 34% | 13% |
| Employment of high-skilled labor | 15% | 26% | 49% | 11% |
| Population retention or growth | 11% | 30% | 40% | 19% |
| Poverty reduction | 9% | 28% | 47% | 17% |
| Water conservation | 6% | 2% | 70% | 21% |
| Air and water pollution reduction | 6% | 4% | 66% | 23% |
| Resident health | 4% | 6% | 62% | 28% |
| Energy conservation | 4% | 15% | 57% | 23% |

Figure 4. To what extent did the project result in the development, expansion, or enhancement of the following?

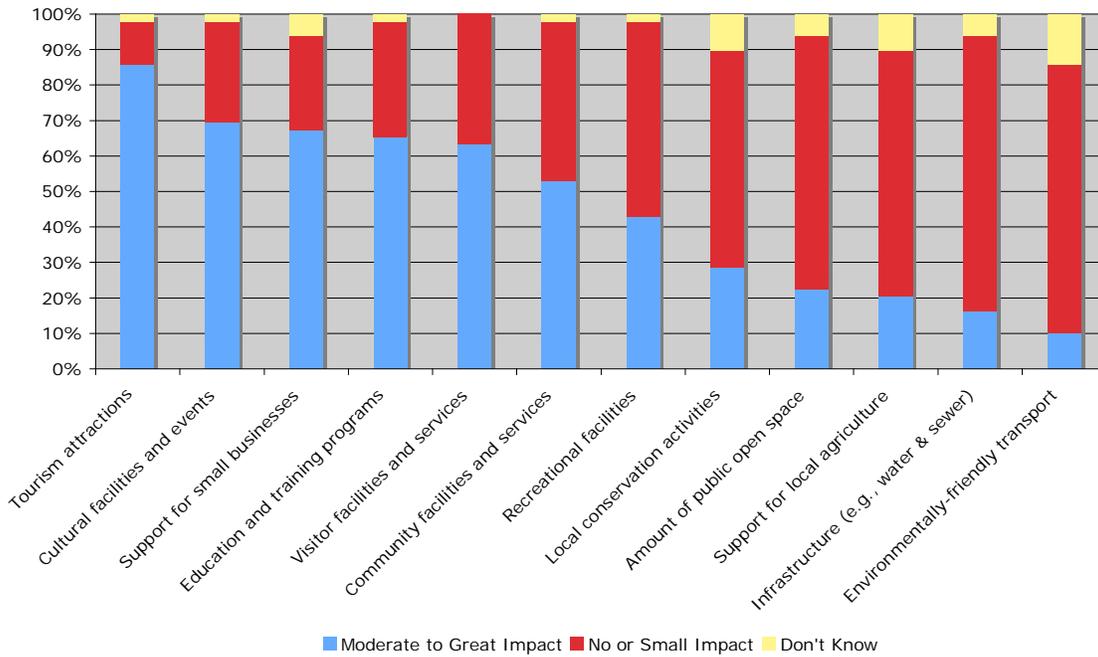
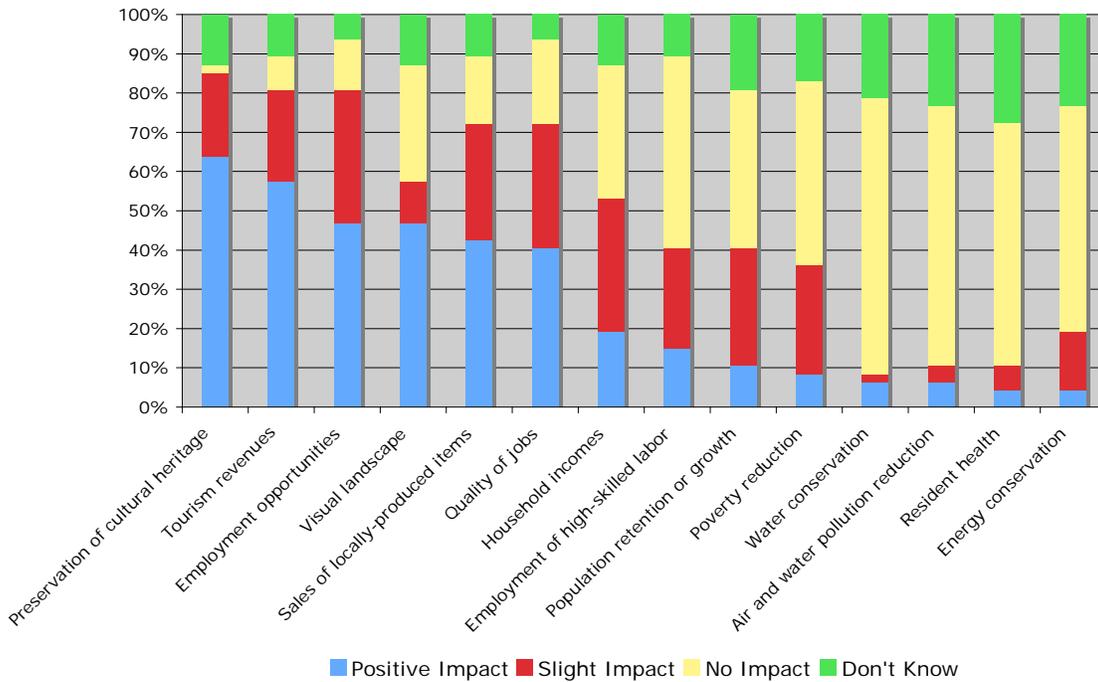


Figure 5. What impact did the project have on the following?



➤ Second Survey

For the second survey RTS created a database of 114 specific projects, in consultation with ARC staff, falling in the category of tourism and asset-building projects, with closing dates from the period 2000 to the present. In this survey we also asked for the respondent name and title and number of the project though the respondents were guaranteed confidentiality. Having the project name and number allowed us to compare the numerical impact estimates reported to the data in the ARC-provided database on a project-by-project basis.

The final participation rate was 60 percent, a high figure for surveys of this nature. Many of the projects were almost ten years old by the time of the survey, which undoubtedly moved the response rate down. Failure to respond was almost exclusively because of departure or death of the original project manager.

Universe of respondents: The 69 respondents to the survey represent a true cross-section of the types of projects funded under this ARC program. Some important features of the respondents include:

- 82% of respondents were from projects closed out by ARC
- Projects covered a full range of activities including development of marketing plans, expansion of tourist facilities, offering of educational services, and development of visitation trails.
- Respondents included projects in every ARC state with the exception of South Carolina.
- ARC investment varied from projects of \$10,000 to \$500,000, with the latter focused on construction and renovation projects.

Purpose and structure of the survey: The survey served three main purposes.

1) *To measure specific results – outputs and outcomes of the project:* Outputs focused on the numbers of individuals, businesses and communities served through the project, the amount of additional funds leveraged by the project, any materials developed through the project, and any programs and plans developed. Outcomes focused more on quantifiable measures of project success, e.g. jobs created and retained, businesses improved, communities improved, etc. In all cases, project managers were asked to assign a number value to the project's impact.

2) *To measure impact across the Triple Bottom Line:* In addition to examining quantifiable outputs and outcomes, project managers were asked to estimate their project's impact across a range of measures. Project managers used a scale ranging from a very negative impact to a very positive impact. Four broad categories were used for this section of the survey.

- *Economic measures:* Participants were asked to gauge the general impact on the following categories: population; employment; personal income; household assets/wealth; business assets/revenues; and, public assets/revenues.

- *Efficiency measures:* Participants responded to a series of questions relating to the project's impact on regional competitiveness. Specifically, participants were asked to gauge impact on: job stability; efficiency; productivity of land, labor, energy or capital; and, access to markets. While efficiency is not always included as a discrete component of the triple bottom line, creating a separate category allowed respondents to focus more directly on these measures rather than embedding them within other categories.
- *Social measures:* Participants were asked questions relating to the project's impact across the following measures relating to the social component of the triple bottom line: civic life and governance; health, education, public safety and access; culture, arts, other amenities, and public assets.
- *Environmental measures:* All participants were asked to measure the qualitative impact of their projects on their community's environment in the following three categories: air and water quality; land and natural resources; and recreational opportunities.

3) *To measure visitation patterns:* ARC staff requested that we include questions relating to the purpose of visitation of tourists as well as issues relating to accommodation, mode of transport and length of stay. However, since very few of respondents kept track of this information, the vast majority of respondents chose not to respond to this portion of the survey and since it was not in the original scope of the project we do not provide a significant discussion of these questions in the report.

Quantifiable measurements

Much of the impetus behind ARC's request for a second survey was to look at the specific measurable impacts – jobs created and retained, leveraged private investment, businesses created, etc. – that are used to document program effectiveness. The questions focused on *outputs* and *outcomes*. A brief description of the definitions will be useful. According to ARC provided materials (DataDictionary.doc dated October 16, 2007):

- *Output* usually refers to activities, as opposed to actual outcomes such as businesses served as opposed to business created or business sales increased.
- *Outcome* refers to tangible results such as jobs created or retained, businesses created or leveraged investment.

The ARC provided database provides projected and, for closed projects, actual impacts and activities for outputs and outcomes.

The actual definitions are also important. ARC provided guidance on definitions is as follows, edited to remove definitions not relevant to this effort (Key definitions11-06.doc):

“There are just a few key performance measurements which are the main outcome measures for ARC programs and for reporting to OMB (Office of Management and Budget): jobs created, jobs retained, leveraged private investment, households served, students with improvements, and workers trained.

Jobs Created. Generally, there are two types of jobs that are reported as outcomes for ARC funded projects: non-construction project-related jobs, and private sector jobs that will result once the ARC funded services or project is completed.

First, a grantee should determine if there are any direct hires that have been made as a result of the project’s operation (e.g. teachers, public safety, information services, etc.) Often these direct hires are the result of public sector spending or funding by private foundations.

Second, a grantee should determine how many private sector jobs will be created in three years once the ARC-funded services are delivered or the project is completed. These job projections are usually related to additional investments in manufacturing plant and equipment, retail, commercial real estate development, or other operations that will lead to new hires.

Jobs Retained. The definition of jobs retained is usually measured by the number of workers actually enrolled in a specific training program, or by the number of jobs at a business that will be retained because of an investment that is needed to keep the business and jobs in continued operations in the area.

Leveraged Private Investment represents private sector financial commitments that are not part of the project funding but follow as a result of the completion of the ARC-supported project (such as an infrastructure project) or the delivery of services (e.g. worker training, marketing campaign, export promotion program). Leveraged private investment is a performance measurement since it is a desired outcome, and leveraged private investment is usually the principal reason that any project can report “jobs created.”

Table 3 presents the survey results and, where available, comparable data from the ARC project database for *outputs*. [Note that for the following tables the database numbers reflect only the 69 projects associated with the survey.] The “Reported on Survey” column refers to actual estimated impacts within the categories provided by respondents for their projects. The “Projected Outputs” column refers to the projected outputs for the same projects from the ARC database. We used *projected* instead of *actual* data reported for two reasons. First the *actual* number is provided at project closeout and therefore

Table 3. What specific results (outputs) were actually achieved by this project?

| Outputs Category | Reported on Survey | Projected Outputs | Ratio Reported to Projected |
|---------------------------------|--------------------|-------------------|-----------------------------|
| Participants Served | 1,322,520 | 89,591 | 14.8 |
| Businesses Served | 2,790 | 2,664 | 1.0 |
| Nonprofit Entities Served | 892 | NA | NA |
| Public Agencies Served | 141 | NA | NA |
| Communities Served | 880 | NA | NA |
| Visitor Attractions Developed | 346 | NA | NA |
| Programs and Plans Developed | 474 | 31* | 15.3 |
| Meetings and Events Held | 1,236 | NA | NA |
| Promotional Materials Developed | 1,405,918 | NA | NA |

* - Total of "New Programs Developed" and "New Strategic Planned Developed"

NA -- Information not available in ARC project database

does not reflect the “three years once the ARC-funded services are delivered or the project is completed.”

Second, it is important to compare the actual numbers to the projections to start to understand whether projects are successful and whether project developers have the expertise and ability to estimate impacts and track actual results. The results from the first survey, our interviews (discussed below) and the case studies suggest that project managers are concerned about their ability to project and track project impacts.

As reflected in Table 4 the 69 projects reflected in the survey demonstrate substantial impacts within the regions they serve. The survey reflects that the projects served many more participants and generated substantially more programs and plans than projected. While this reflects respondents’ experience it is likely that the definitions that were used in the original proposals were not the same ones that the respondents used for the survey. This is an important result as it provides more evidence that grantees do not have robust or consistent understanding of the measures that ARC focuses on. Unless everyone is “on the same page” it is unlikely that reported results can be meaningfully compared to the original projections.

The “Ratio Reported to Projected” can provide an effective and succinct measure of project effectiveness if the definitions used are consistent. In the three instances where survey output answers can be compared to the ARC database, two likely reflect definitional inconsistency as it is unreasonable to expect that the projects will serve, for example, 15 times more participants than projected. For “Businesses Served” the ratio suggests that the project leaders were able to make reasonable estimates of this measure and ultimately deliver outputs.

Table 4. Who actually benefited from this project? What results were actually achieved?

| Outcomes Category | Reported on Survey | Projected Outcomes | Ratio Reported to Projected |
|------------------------------|--------------------|--------------------|-----------------------------|
| Participants Improved | 363,594 | NA | NA |
| Businesses Improved | 872 | NA | NA |
| Nonprofit Services Improved | 190 | NA | NA |
| Public Services Improved | 111 | NA | NA |
| Communities Improved | 502 | NA | NA |
| Leveraged Private Investment | \$19,343,116 | \$47,511,751 | 0.4* |
| Jobs Created | 1,257 | 1,783 | 0.7 |
| Jobs Retained | 512 | 306 | 1.7 |
| Businesses Created | 110 | 39 | 2.8 |
| Businesses Retained | 106 | NA | NA |
| Business Sales Increased | \$7,962,073 | NA | NA |

NA -- Information not available in ARC project database

* Removing a questionable \$30 million leveraged investment projection in a single project results in a ratio of 1.1.

The survey finds that the projects had substantial positive impacts (outcomes) within the communities they served. For example, from Table 3 we see that 2,790 businesses were served (a specific output) in some fashion and, from Table 4, that output was a factor in improving 872 businesses (a specific outcome). The survey results for jobs created and retained and businesses created indicate that while these measures are fairly obvious and well understood the ability to project the impacts is not a trivial effort.

As noted above in the discussion of the first survey and the interview results that follow this discussion (and consistent with the case studies in Appendix E), project managers indicated that estimating these types of impacts was difficult. Many used anecdotal methods and did not have an evaluation plan in place when the project began – a key requirement for an effective evaluation. They also indicated that they did not have adequate resources to conduct a systematic evaluation program.

The results for Leverage Private Investment numbers in Table 4 present another issue. The difference between the survey estimate of \$19.3 million and the projection of \$47.5 million is due to a single project that projected \$30 million in its proposal but reported no investment in their project closeout report and in the survey. The project was a small \$50,000 tourism promotion project (we do not provide an additional description of the project to maintain the promised confidentiality of the respondent). In discussions with the grantee and reflected in the project closure report, the \$30 million in leveraged private investment that was projected in the proposal to ARC was based on the overall tourism industry in the region. It is extremely unlikely that such a small investment could lead to

an impact of that size. This suggests that ARC staff may need to have a closer relationship with grantees to assist them in developing more reasonable estimates for project impacts.

Qualitative measurements

In addition to asking grant recipients about quantifiable outcomes and outputs, the survey inquired about impacts that are best expressed qualitatively. Specifically, the survey asked each grant recipient to rate their projects impact on their communities' economic health, on issues of economic competitiveness, on social issues and on the environment. For each category, project managers were asked to state their project's impact on a scale ranging from very negative to very positive. Significantly, on no category did recipients rate their impact as either negative or very negative. In this section of the report, we go into detail on each of the broad categories.

Survey respondents indicated, as seen in Table 5 the greatest economic impact coming in three main outputs: Business assets/revenues, public assets/revenues and employment, with all three of these indicators having 67 or 68 percent of respondents showing a positive or very positive impact. This is not particularly surprising since for the vast majority of the projects, these categories were the ones assigned specific numeric targets in the application process. Thus, the projects had these impacts specifically in mind. There do appear to have been positive impacts on economic measures not specifically named in the grant application process. For instance, 50% of respondents stated that their project had a positive or very positive impact on personal income and 44% stated that the project had positively impacted the community's population. Less clear were the projects impact on household assets and wealth. 70 percent of respondents characterized that the impact on household wealth as only neutral. This should not be seen as a condemnation of those projects, which only showed neutral impact on this indicator, but rather a reflection of the fact that these projects did not pursue that goal in any explicit way.

Respondents were also asked to estimate the impact of their project on various indicators of a region's competitiveness (Table 6). The indicators included job stability; efficiency; productivity of land, labor, energy or capital; and access to markets. In this set of indicators, the responses tended to be more ambiguous, with more than half stating that their project had a neutral impact in each of the four indicators. Access to markets had the most positive response, with 21% stating that their project had a very positive impact on the region's access to markets. For tourism projects access to markets likely means the ability to attract visitors from regions and communities who may not have known about a particular destination. Thus projects that focus on increasing awareness through the creation of trails or expansion of advertising through brochures or on-line materials tended to report more impacts in this indicator.

Table 5: On a scale from very negative to very positive, how would you rate the impact of your project on the following economic measures?

| Answer Options | Very Negative | Negative | Neutral | Positive | Very Positive |
|--------------------------|---------------|----------|---------|----------|---------------|
| Population | 0.0% | 0.0% | 56.1% | 30.3% | 13.6% |
| Employment | 0.0% | 0.0% | 31.8% | 57.6% | 10.6% |
| Personal income | 0.0% | 0.0% | 50.0% | 40.9% | 9.1% |
| Household assets/wealth | 0.0% | 0.0% | 69.7% | 24.2% | 6.1% |
| Business assets/revenues | 0.0% | 0.0% | 31.8% | 56.1% | 12.1% |
| Public assets/revenues | 0.0% | 0.0% | 33.3% | 50.0% | 16.7% |

Table 6: On a scale from very negative to very positive, how would you rate the impact of your project on the following economic measures?

| Answer Options | Very negative | Negative | Neutral | Positive | Very Positive |
|--|---------------|----------|---------|----------|---------------|
| Job Stability | 0.0% | 0.0% | 50.0% | 43.9% | 6.1% |
| Efficiency | 0.0% | 0.0% | 51.5% | 34.8% | 13.6% |
| Productivity of land, labor, energy or capital | 0.0% | 0.0% | 57.6% | 31.8% | 10.6% |
| Access to markets | 0.0% | 0.0% | 50.0% | 28.8% | 21.2% |

The social measures most positively impacted by the ARC-funded projects tended to be ones in which the increase was an explicit goal (Table 7). Thus, the fact that 83% of respondents indicated that there was a positive impact on culture, arts and other amenities is likely due to the fact that so many projects focused on expanding those very offerings. Similarly, many of the funded projects focused on expanding educational offerings through enhanced training or programs, making the 72% who pointed to a positive or very positive impact on education unsurprising. Of course, just because these programs had the goals of expanding cultural offerings or increasing educational opportunities is not guarantee that they would actually achieve success across these measures. The generally positive reviews given by project managers should be seen in a favorable light.

Table 7: On a scale from very negative to very positive, how would you rate the impact of your project on the following social measures?

| Answer Options | Very negative | Negative | Neutral | Positive | Very Positive |
|--------------------------------|---------------|----------|---------|----------|---------------|
| Civic life and governance | 0.0% | 0.0% | 43.9% | 36.4% | 19.7% |
| Health | 0.0% | 0.0% | 65.2% | 25.8% | 9.1% |
| Education | 0.0% | 0.0% | 28.8% | 43.9% | 27.3% |
| Public safety and access | 0.0% | 0.0% | 71.2% | 19.7% | 9.1% |
| Culture, arts, other amenities | 0.0% | 0.0% | 16.7% | 36.4% | 47.0% |
| Public services | 0.0% | 0.0% | 57.6% | 30.3% | 12.1% |
| Other community assets | 0.0% | 0.0% | 19.7% | 48.5% | 31.8% |

The respondents were asked to gauge their impact on a set of environmental indicators (Table 8). In terms of air and water quality, the fact that none of the respondents believed that their project had a negative impact on the environment is impressive. Since hardly any of the projects had explicit environmental focuses, it is not surprising that the vast majority of respondents thought their project had at best neutral environmental impacts. The indicator in which most respondents assigned a positive or very positive impact was on expansion of recreational opportunities. Again this should not be thought of as particularly surprising since many of the projects had increasing access to parks or facilities as an expressed goal at the time of the grant application. From that standpoint, in the eyes of the project manager, it appears that a large percentage—68%— have reached their goal.

Table 8: On a scale from very negative to very positive, how would you rate the impact of your project on the following environmental measures?

| Answer Options | Very negative | Negative | Neutral | Positive | Very Positive |
|--------------------------------|---------------|----------|---------|----------|---------------|
| Civic life and governance | 0.0% | 0.0% | 43.9% | 36.4% | 19.7% |
| Health | 0.0% | 0.0% | 65.2% | 25.8% | 9.1% |
| Education | 0.0% | 0.0% | 28.8% | 43.9% | 27.3% |
| Public safety and access | 0.0% | 0.0% | 71.2% | 19.7% | 9.1% |
| Culture, arts, other amenities | 0.0% | 0.0% | 16.7% | 36.4% | 47.0% |
| Public services | 0.0% | 0.0% | 57.6% | 30.3% | 12.1% |
| Other community assets | 0.0% | 0.0% | 19.7% | 48.5% | 31.8% |

INTERVIEW RESULTS

As noted in Section 1, the RTS team conducted interviews for 32 projects including 32 project managers or directors and 61 stakeholders who saw impacts from their perspective. The complete interview database is provided as a separate document.

The general attitude of all participants was positive and optimistic about their projects, despite having to deal with numerous challenges. Overall, interviews reveal that:

- ✚ The projects would not have been viable without ARC funding and for most the ARC grant started the project;
- ✚ Nearly all project managers reported overall positive relationships with ARC and its staff;
- ✚ Project managers faced numerous challenges concerning funding, convincing officials to support their efforts, and managing project delays;
- ✚ Generally projects have positive intermediate outcomes, but “open” projects have yet to impact regional economic development;
- ✚ A significant number reported that the “jobs created” measure was insufficient to measure the true impact of the project;
- ✚ Employment goals are considered long-term goals, while gains in social capital were thought of as short-term successes;
- ✚ Some projects acted as a catalyst for environmentally friendly development;
- ✚ Many interviewees reported an improvement in community collaboration;
- ✚ Almost all were successful at achieving goals but some did not do it in a timely manner (they needed extensions for financial reasons);
- ✚ Almost half of stakeholders were at the table when the goals were set;
- ✚ Most cited that the most difficult challenge or impediment to success had to do with funding and;
- ✚ Virtually all thought that the project had been successful to date.

Views on the ARC program and staff

It is clear that grantees have a high regard for the ARC program and how they have interacted with staff. Most project managers remarked that ARC funds were “crucial” or “critical” to the success of their project, particularly in getting projects off the ground. Because of the lack of tangible deliverables, procuring money for the design or planning component of a project can be difficult. As such, many of the ARC funds were used for this purpose.

Project managers generally reported positive working relationships with ARC. A few project managers felt that the reporting requirements and application process were too cumbersome for the relatively small amount of funding awarded. The one commonly cited critique was that more guidance on report format would have been helpful.

Most project managers remarked that ARC was flexible to work with. Comments to this point included, “They did all that they could within reason,” “I never felt like there was a stupid question,” and “My contact was always in touch and I never got buried in paperwork.”

Evaluation and Impact Measurement

Respondents had thought about impact measurement issues and had clear opinions. Most interviewees commented that although “jobs created” is a traditional metric for economic development, it insufficiently captured the outcomes of these projects. As one project

manager alluded, although tourism may not create additional jobs, it can support and bolster many of the existing ones. Measuring this is difficult. Another suggested that measuring capacity would be a more appropriate metric. Interviewees almost unanimously agreed that employing long-term metrics would also help demonstrate impact.

Common metrics included completion of physical or infrastructural improvements, number of new businesses created, number of visitors/attendance and number of jobs created. Some of the asset mapping projects also included a goal number of assets to be included on an inventory. While all of these metrics were deemed appropriate by project managers, many remarked that like jobs created, these metrics failed to capture some of the other significant outcomes, like increased social capital or environmental conservation. As one stakeholder remarked, it often seemed that the formula being used was designed for a completely different kind of project.

Challenges

Despite the diversity of projects reviewed, four common challenges persisted. The first were political challenges. A number of interviewees remarked that convincing local officials of the promise of their projects was a significant impediment to success.

A second challenge came from confronting negative stakeholder and community perceptions. Many of the project managers, particularly those with less tangible final products suggested that community members were suspicious of tourism as an economic development tool. In areas that had previously relied upon manufacturing, tourism seemed too “soft” of a solution.

A third challenge came from getting the word out, both to enough people and to the right people. In many communities, project managers described the communities as splintered. Finding the right avenue to contact people was difficult, particularly for project managers who were not part of the immediate community. Furthermore, some communities lacked central organizations, so project managers were faced with the challenge of identifying possible participants before specific work on the project could begin. Although the school system would prove to be a good contact point in one of the asset mapping projects, for example, the project manager and stakeholders first had to resolve the residual distrust many members of the community had from negative experiences with school.

Finally, there was extensive resistance to collaboration, particularly in some of the more distressed communities. Business owners did not want to cooperate for fear that their competition would get ahead. In other communities, historical conflicts were unfortunately rekindled.

Triple Bottom Line

Project managers overwhelmingly noted significant social improvements. In the communities that were splintered, people began to come together. In communities where loss of industry had resulted in a communal depression, people began to take pride in

assets previously taken for granted. In project after project, project managers remarked that by building an economic development plan around something unique to a community, you build something that cannot be outsourced. Other social impacts noted included an increasing tendency towards regionalism. In communities that had previously been myopic, many of the projects helped communities to look beyond political and geographic borders.

For the projects that required alterations of physical infrastructure, environmental impacts were highly salient, going beyond the required environmental impact statements. Even in areas reported to be conservative about environmental protection, an understanding existed that the natural assets upon which these projects were based needed a level of protection so as to support sustainability. Of the projects with physical impacts, project managers commonly remarked that considering environmental impact was unavoidable and that these issues were increasingly persistent in all their projects.

Economic impacts were readily mentioned. Although not all projects reported jobs created, each project listed an expected financial impact in the initial application. During interviews, many project managers stated that although they could not give exact revenue impacts, all offered anecdotes of economic impacts, from new businesses opening, expansion of existing businesses and increases in visitation. One project manager remarked that the largest economic impact was that people were now in his area not by accident, but on purpose. Although the project was too new to report economic impacts, it was his position that this change in visitorship points to a positive economic impact.

CASE STUDY RESULTS

Case studies were conducted at project sites in the Northern, Central and Southern regions of ARC. The complete case studies are found in Appendix E. We attempted to cover a range of project types including focus, project size, types of projected outcomes.

We offer two shortened case studies that document some of the crosscutting characteristics we found. One describes an effort to assist in the renovation of a resort and conference center and the second profiles a project to build the agri-business and agri-tourism of a regional economy.

ATWOOD LAKE RESORT RENOVATIONS

PROJECT DESCRIPTION

ARC awarded a grant of \$200,000 to the Muskingum Watershed Conservancy District in 2003 to pay for a portion of the renovation of the Atwood Lake Resort and Conference Center in Carroll County, Ohio. The resort, Carroll County's largest private employer and only major lodging facility, has 123 lodging units, meeting space for up to 350, an 18-hole golf course, and other recreational facilities. The resort current employs 50 year-round workers and 100 seasonal workers.

The ARC funding supported three components of the project: 1) bringing the facility into compliance with the Americans with Disabilities Act (ADA), primarily by installing an elevator to provide access to guest rooms and meeting space; 2) installing new windows to make the facility more energy efficient; and 3) improving the facility's public spaces. The total cost of these three components was \$2.5 million.

The projected outcome of the project was the retention of the resort's 50 full-time jobs and the creation of 10 additional jobs over a five-year period.

PROJECT OUTCOMES

The resort is clearly a critical source of support for the tourism economy in Carroll County and the surrounding region. It is the only full-service resort in the county. In fact, the county has only six other lodging facilities other than campgrounds—five bed and breakfasts and a recently constructed 43-room limited service motel with no recreational amenities. Surrounding counties have additional lodging facilities, but few full-service resorts. Tourism is a major component of the region's economic base and second only to agriculture in Carroll County according to local tourism and economic development officials.

In addition to attracting visitors to the region, the resort is a primary contributor to the region's tourism marketing infrastructure. According to the director of the Carroll County Convention and Visitors Bureau (CVB), the resort generates approximately 75 percent of the county's room tax revenue. Half of this, approximately \$60,000, is allocated to the Convention and Visitors Bureau for tourism marketing.

Tourism officials in surrounding counties recognize the importance of the resort as a regional tourism attraction because of the limited number of resort properties with comparable features in the region. In this context, more guests at the resort translate into more visitors to surrounding counties. This is why local tourism organizations such as the convention and visitors bureau in adjoining Tuscarawas County include the resort in their marketing packages.

MEASUREMENT ISSUES

It can reasonably be argued that the project led to the retention of all of the jobs at the resort, since the resort's survival appeared problematic had the renovations not been undertaken. The role of ARC funding is less clear, however. Given ARC's small financial role in the project, it is likely that the renovations would have proceeded without ARC support, although possibly with some reduction in scope.

While the ARC funding application indicated that the project would result in the creation of ten new jobs, direct employment at the resort did not increase. No effort has been made to estimate indirect job creation or retention from the project. This could be done by calculating the number of visitor-days spent at the resort, applying available data on

non-lodging visitor spending, and using an economic impact model to estimate total indirect spending and employment. Expenditures resulting from an increase in visitor-days after the renovations would translate to new job creation. The state of Ohio has developed a model to estimate direct and indirect spending and employment resulting from tourism at the county level, and this model could likely be adapted to estimate the project's indirect impacts.

BROOME COUNTY AGRI-TOURISM AND MARKETING PROJECT

PROJECT DESCRIPTION

ARC awarded a grant of \$24,206 to the Cornell Cooperative Extension in Broome County, New York, in 2003 for an initiative to strengthen the county's agriculture industry through diversification and the development of agri-tourism. The total cost of the project was \$96,697. The \$72,491 local match included \$68,991 of in-kind support from the grantee and \$3,500 from the Broome County Chamber of Commerce.

The initiative had several components:

- ✚ Providing training and technical assistance to farmers in agri-tourism, marketing, product diversification, and business planning and promotion.
- ✚ Forming three producer purchasing and/or marketing groups.
- ✚ Developing agri-tourism and direct-to-consumer marketing tools. This would include creating and distributing an agri-tourism marketing brochure, promoting tour packages to motor coach tour owners, creating a countywide logo for agricultural products, and installing agri-tourism signage.
- ✚ Creating and distributing a five-year comprehensive agri-tourism development plan.

The initiative was expected to result in an increase of 50 percent in direct sales from farmers to consumers, the expansion of 50 percent of existing agri-businesses to include agri-tourism and/or an alternative enterprise, the creation of 25 new agri-businesses, and the creation of 20 new jobs.

The Extension's executive director and agricultural economic development specialist believe that the ARC funding was essential to completing the project work plan. It enabled the Extension to hire a part-time program assistant to provide additional staffing for the project. The agricultural economic development specialist, who directed the project, would not have been able to undertake many of the tasks included in the work plan given her existing workload. They also believe that the ARC-funded project laid the groundwork for subsequent initiatives by demonstrating the potential for agri-tourism and direct-to-consumer marketing, and by enabling them to build relationships with business organizations and political leaders and leverage additional resources.

PROJECT OUTCOMES

Agri-tourism and agri-marketing efforts in Broome County have continued and have gained momentum since completion of the project. As local political officials and economic development professionals have become more aware of the economic benefits of agri-tourism and local purchasing of agricultural products, new efforts have emerged to more fully capture these benefits. Examples include a county-commissioned feasibility study for an all-weather farmers' market and a proposal to develop a shared-use commercial kitchen.

The agricultural economy has tended to function in a separate sphere from other segments of the local economy with its own set of relationships and organizational structures. The project and ensuing activities have brought the agricultural community together with other local economic stakeholders in collaborative efforts that have identified common interests and built relationships. The project has also built relationships, organizational structures, and leadership among non-traditional agricultural producers (e.g., through the marketing and production groups). This has increased their ability to work together to address common challenges and opportunities.

Looking to the future, there is a general consensus among agricultural, economic development, tourism, and political representatives that agri-tourism and local direct-to-consumer sales have strong growth potential and will contribute more to the local economy in years to come, particularly if the efforts that have been initiated in recent years are maintained and expanded.

MEASUREMENT ISSUES

There is considerable evidence that the project and ensuing activities have helped local agri-businesses to increase sales to visitors and local consumers. In a random sampling of business listed in the agri-tourism guide half of the businesses attributed an increase in sales to the guide. The growth in patronage of the farmers' markets is another general indicator. Finally, the level of engagement and enthusiasm among agri-businesses themselves indicates that they see the value of these activities in their bottom lines.

That being said, the Extension has only been able to estimate through observation the degree to which the economic impacts projected in the ARC funding proposal were achieved. It estimated 12 new agri-businesses formed as of mid-2008 compared to an initial goal of 25, and an increase of 15 agri-business jobs compared to an initial goal of 20. The Extension has not been able to document increases in direct sales from farmers to consumers for various reasons. The Extension is exploring the development of practical methods to obtain sales data, but it is uncertain whether data collection barriers can ever be fully addressed.

Data collection issues aside, the Extension staff have concluded that it was unrealistic to expect the magnitude of impacts projected in the ARC funding proposal within the

timeframe of the project. While they see evidence of progress, this is a process that takes place over a period of several years, not one or two. Therefore, the timeframe for assessing the economic impacts of this type of project must extend far beyond the end of the ARC grant period.

OVERALL CASE STUDY IMPRESSIONS

Several common impressions were found across the range of projects including the additional case studies included in Appendix E.

- ✦ Projects, by necessity, often evolve from initial conception. Flexibility in project implementation based on changing circumstances has the potential to improve projects and their impacts. For instance, the focus of an effort to build the ceramics industry in Southeastern Ohio changed due to a downturn in the economic viability of the targeted firms.
- ✦ The vectors of impact were broader than initially envisioned. The Broome County agri-tourism project, for example, led to increased collaboration and spin-off projects such as the proposed shared-use commercial kitchen.
- ✦ Impacts are often difficult to track, estimate and justify. For instance, while heritage trails in Tennessee and Georgia increased visitation to targeted sites, the expenditures of these visitors in the region's shops and hotels are difficult to track. There are a number of reasons for this including technical challenges, lack of grantee expertise in data collection and evaluation, and resource shortages.
- ✦ Local and regional politics and relationships can have significant positive and negative impacts. In some cases, such as a crafts initiative in Yancey County, North Carolina, potential partners did not collaborate lessening the potential impact of the project.
- ✦ Project proponents often felt the measured project metrics did not reflect the most important impacts of the project.
- ✦ Impacts often accrue to non-grantees such as surrounding counties and businesses unrelated to the project.
- ✦ There are often un-measured spillover and synergy impacts from projects. This is particularly evident in the Crooked Road region of southwest Virginia where a series of related projects funded by ARC have helped create a creative cluster that builds on the relationship between projects.
- ✦ Many projects had impacts on the social and environmental metrics of TBL even though the projects had not been planned to affect these elements.

SUMMARY

The RTS team used a broad range of data collection and analytical tools both quantitative and qualitative. These varied methods of intelligence produced consistent results indicating that the findings are robust and provide consistent guidance for evaluation and recommendation of ARC evaluation procedures for Tourism, Cultural Heritage and Natural Asset-Related projects. Section 3 uses the analysis within this section to develop reasonable

estimates of the impacts of the ARC tourism project portfolio on the key performance measures used to judge project success. Section 4 then applies these findings to the question of further refining metrics and improving methods of measuring impacts.

SECTION 3: ESTIMATING IMPACTS FROM THE PORTFOLIO OF ARC TOURISM, CULTURAL HERITAGE AND NATURAL ASSET-RELATED PROJECTS

The second on-line survey discussed in Section 2 combined with the full universe of projects in the ARC database provides a structured method to estimate the overall impacts of the tourism, cultural heritage and natural asset-related portfolio of projects funded by ARC.

The survey, which focused on quantitative outcomes and outputs, enabled us to collect data from project managers in a way that mostly avoids the problem of the estimated impacts provided at project closeout. The final report submitted to ARC at the completion of a project is required to estimate “actual” impacts. The estimates are supposed to include impacts going forward three years under the correct assumption that impacts normally take time to occur after a project is completed. The survey strongly suggests that under these circumstances the managers focus more on present conditions, not three years out, and appear to underestimate project impacts.

In our survey, the project managers were able to look back at their projects after more time had elapsed and projects had had a chance to mature and generate impacts within their communities. This was true except for a handful of the 69 projects surveyed, specifically three construction projects that have only recently been completed. When we compare the survey estimates which are based on a longer time horizon we find that the survey estimated impacts are much more consistent with the initial pre-project projections as compared to the immediate post closure estimates.

Table 9 includes a column that is a ratio of the survey estimates of outcomes compared to the initial projected outcomes from the original proposal for jobs created and retained, businesses created and leveraged private investment. As an example, the survey indicates that the surveyed projects generated 1,257 jobs compared to the initial projection for those projects of 1,783 jobs, generating a ratio of 0.7. The proposals appear to have somewhat overestimated the ultimate job impacts. For jobs retained the survey estimate of 512 is higher than the original projection of 306, generating a ratio of 1.7 suggesting that the original projections underestimated the ultimate impacts.

Assuming that the 69 projects for which surveys were completed are representative of the full universe of 132 projects allows us to generate estimates of impacts for the full universe using the estimated ratios.

Table 9 displays the generated estimates of impacts from the ARC portfolio of tourism, cultural heritage, and natural-resource related projects.

Table 9. Estimated Impacts of the Universe of ARC Tourism Projects

| Impact Category | Initial Projection of Impacts | Survey-based Adjustment Ratio | Estimated Post Project Impacts | Estimated Unit Impacts of ARC Funding |
|------------------------------|--------------------------------------|--------------------------------------|---------------------------------------|--|
| Jobs Created | 3,671 | 0.70 | 2,588 | \$4,161 |
| Jobs Retained | 5,616 | 1.67 | 9,397 | \$1,146 |
| Leveraged Private Investment | \$65,575,691 | 0.41 | \$26,697,357 | \$0.40 |
| New Businesses Created | 165 | 2.82 | 465 | \$23,139 |
| Businesses Served | 7,148 | 1.05 | 7,486 | \$1,438 |

The *Initial Projection of Impacts* column is the sum of the original projections from the 69 project proposals submitted to ARC as reflected in the ARC provided database. The *Estimated Post Project Impacts* column adjusts the projected impacts based on the ratios estimated from the survey results as shown in Tables 3 and 4 of Section 2. So, for example, applying the jobs created 0.7 ratio we estimated in Table 4 to the original ARC database projection for job creation gives us an estimate of 2,588 jobs created by the 132 projects examined in this analysis.

Probably the best way to look at these results is to look at the “bang-for-the-buck” of the \$10.8 million of ARC funding for these projects. The *Estimated Unit Impacts of ARC Funding* column shows that a new job was created in the community for every \$4,161 of ARC-provided dollars. The creation of a new business required \$23,139 in ARC funding. For every \$0.40 invested by ARC in the projects, \$1.00 of leveraged private investment occurred.

SECTION 4: REFINING METRICS AND METHODS FOR MEASURING EMPLOYMENT IMPACTS

THE CONTEXT

The tourism, cultural heritage and natural asset-related projects included in this evaluation primarily address Goal 1 of ARC's 2005-2010 strategic plan – to “increase job opportunities and per capita income in Appalachia to reach parity with the nation.” ARC uses two measures to assess the outcomes of projects funded to achieve this goal. The primary measure is number of jobs created and retained. A secondary measure is leveraged private investment (LPI), under the assumption that private investment generated by ARC-funded projects will result in additional job creation and retention. ARC has developed very specific definitions of each of these measures, as described in its Fiscal Year 2006 Performance and Accountability Report:

- ✦ **“Jobs created”** includes any direct hires that will be made as a result of the project's operation, not including highway or building construction jobs. Also included are private-sector jobs that will be created within three years after ARC-funded services or projects are complete. These jobs are usually related to additional investments in manufacturing plants and equipment, and retail and commercial real estate development. Part-time jobs are converted to full-time equivalents and rounded up to whole numbers.
- ✦ **“Jobs retained”** refers to the number of workers actually enrolled in specific training programs, or to the number of jobs at businesses that will be retained because of an investment that is needed to keep the businesses and jobs in the area or in continued operation.
- ✦ **“Leveraged private investment”** represents private-sector, non-project financial commitments that follow and are the result of the completion of an ARC-supported project or the delivery of services under an ARC-supported project. It is generally estimated for the three-year period following the completion of a project and is separate from any direct private contribution to ARC-supported project funding.

It is clear that job creation and retention is fundamental to ARC's mission and that the commission's congressional overseers assess its performance largely on this basis. Consequently, any methodology developed to measure the outcomes of ARC's activities must put job creation and retention front and center. However, it has become equally apparent through this evaluation that efforts to determine the employment impacts of ARC-funded tourism, cultural heritage and natural asset-related projects present serious methodological challenges. In fact, as it stands now, grantee reporting provides little useful information about employment impacts and does not permit ARC to develop meaningful estimates of the overall employment impacts of this group of projects. This not only presents difficulties for outside evaluators conducting post-program evaluation

but, more importantly, prevents ARC from developing accurate program performance data on an ongoing basis.

This chapter begins by describing the problems that prevent ARC from obtaining accurate and complete information on the employment impacts of this group of projects. It concludes by presenting a new framework for data collection and analysis that seeks to address these problems. It should be emphasized, however, that there are no easy solutions and that ARC will have to weigh the relative costs and benefits of investing in new data collection and analysis methods.

PROBLEMS WITH CURRENT MEASUREMENT METRICS AND METHODS

ARC's tourism, cultural heritage and natural asset-related projects typically fall into the following categories:

◆ *Planning projects*

- ✚ Tourism strategic plans
- ✚ Project feasibility studies
- ✚ Resource inventories
- ✚ Asset mapping

◆ *Implementation projects*

- ✚ Development of tourism or business marketing tools
- ✚ Business training and technical assistance
- ✚ Development/improvement of tourism attractions
- ✚ Development/improvement of tourism infrastructure

In essence, these projects seek to achieve one or both of two direct outcomes:

1. Increase visitation and tourism revenues, with a focus on heritage and recreational tourism.
2. Increase sales of locally produced products, with a focus on crafts and agricultural products.

Achieving these outcomes can, in turn, lead to job creation and retention and additional private investment. Measuring these employment and investment impacts requires two steps. First, accurate data must be obtained on the amount of tourism revenues or business sales generated. Second, methods must be employed whereby estimates of the impacts of increases in tourism revenues and business sales on employment and private investment can be developed. This is consequently a more complicated process than measuring the employment and investment impacts of ARC projects such as business

incubators, industrial parks, and revolving loan funds that provide direct support for business startup, growth and attraction.

Examination of data reporting methods for the projects included in this evaluation uncovered a number of problems that prevent ARC from obtaining accurate and complete data on jobs and private investment.

1. Methods used by grantees to document employment impacts are inconsistent and often methodologically unsound.
2. While it is likely that some of these projects generate additional private investment, there is no practical way to document these impacts for most projects.
3. The project reporting time frame is too short to fully capture the employment impacts of these projects.
4. The impacts of many ARC-funded tourism projects cannot easily be isolated from other factors influencing visitor spending.

➤ **Methods Used by Grantees to Document Employment Impacts are Inconsistent and Often Methodologically Unsound**

This issue primarily relates to implementation projects since planning projects do not typically have immediate or short-term employment impacts. (ARC could monitor the outcomes of planning projects to determine whether implementation resulted in job creation or retention, but this would require establishing a longer reporting time frame with the grantee, as discussed later in this chapter.) Among implementation projects, methodological issues differ for tourism and local sales projects.

Tourism Projects

ARC-funded tourism projects typically involve the development of new marketing tools such as brochures or websites, development or improvements to tourism attractions such as cultural and outdoor recreational facilities, or the development of tourism infrastructure such as way-finding signage and tourist information centers.

Well-established methods exist to measure the economic impacts of tourism projects. These involve a three-step process. First, mechanisms are put in place to track the number of users of marketing tools or the number of visitors to tourism attractions. Second, surveys are conducted to ascertain the role played by the marketing or attractions in causing individuals to visit an area or extend their stay, and the resulting amount of visitor spending that occurs. Third, economic models are used to estimate the impact of increased visitor spending on local income and FTE employment.

ARC tourism grantees do not, by and large, employ these methods. Some do not report employment impacts at all, but use proxies such as increased visitation to tourism attractions, startup of new tourism-related businesses, or hits on tourism web sites. Some measure employment impacts using other methods. These include:

- ✚ Counting job increases at the tourism attractions that received ARC funding;
- ✚ Counting job increases reported by new or existing local tourism-related businesses that may benefit from tourism-marketing or increased attendance at a tourism attraction;
- ✚ Calculating total changes in tourism-related employment from local or regional economic data.

Attribution

These methods suffer from serious limitations. None address the issue of *attribution* – the extent to which the observed increases in employment are attributable to the ARC-funded project. This can result in over-counting employment impacts, which is almost certainly the case when total local or regional tourism employment growth is counted. Conversely, the first two methods can also result in undercounting employment impacts. Counting job increases only at ARC-funded tourism attractions or at identifiable businesses that may benefit from tourism marketing or increased attendance at ARC-funded tourist attractions is unlikely to fully capture increases in tourism-related employment, which are typically widely diffused throughout the local economy.

Another issue relating to attribution is determining the relative impact of ARC monies on a project. It is very unlikely that project managers will have the means and knowledge to accurately attribute impacts between funding sources. This is particularly true when ARC funds a specific element, say a museum exhibit, as part of a broader museum development project. There are basically three options for dealing with the issue of attribution. The first is to view ARC funding as a *funding source without which the project would not have occurred*. Under this option ARC would attribute the full level of impacts from the projects but use language that makes it clear what is being measured. A second method is to allocate benefits based on ARC funding as a percentage of total funding. This is likely to underestimate the value of the ARC contribution because in many cases the ARC funding is the basis for the project and attracts local and other matches that would not occur otherwise. Lastly ARC could adopt a hybrid system that uses the first method when ARC funding represents a large fraction of funding and uses an allocation method where ARC dollars are supportive but are not the basis for the project.

Differences in methods for counting job impacts across projects also makes it difficult for ARC to assess the relative impacts of different projects. Even if projects are of a similar type, comparing impacts would be misleading where methods for calculating employment varied significantly.

Adopting established methods for economic impact analysis of tourism projects, while adding complexity and cost to the outcome reporting process, could at least partly address these problems.

Local Sales Projects

ARC-funded projects to increase sales of local products typically involve entrepreneurial training, technical assistance, or the development of new marketing tools such as marketing brochures or websites. Most local sales project grantees appear to collect some data on sales and/or employment impacts from the business beneficiaries of these projects.

The ability to identify and obtain data from all or most of the beneficiaries of these projects makes it easier to estimate employment impacts than is the case with tourism projects. Beneficiaries can provide employment figures and are in the best position to assess the degree to which any employment changes can be attributed to the project. However, there are methodological issues with the way data is currently collected. First, as noted, some grantees do not collect any data. Second, data collections methods are inconsistent, making it impossible to aggregate or compare employment data. Third, asking project beneficiaries about new job creation is unlikely to fully capture employment impacts. Many of these business owners are small artisans or farmers. Sales increases resulting from the project may in many cases not result in new hiring, but may result in increased hours for existing employees.

Taking these problems into account, a more appropriate method to estimate employment impacts of local sales projects would be to survey project beneficiaries on sales increases attributable to the project and then apply an economic model to estimate local FTE employment impacts. This would not only achieve consistency in reporting among these projects, but would provide comparable employment data to that generated for tourism projects using established methods of tourism economic impact analysis.

➤ There is No Practical Way to Measure Leveraged Private Investment for Most Projects

In some cases, private investment leveraged by an ARC-funded project can be identified and measured. For example if a greenway is developed or a museum is built or expanded and businesses serving visitors to these attractions open nearby, the capital investment made by these businesses can reasonably be attributed to the ARC project. Even in these cases, however, methodological issues arise. For example, if one business buys a property and another leases, how should their investments be compared? Should the lease of a property be capitalized as a proxy for capital investment? Should a working capital injection be considered a leveraged investment?

A more fundamental problem is that all of the private investment leveraged by a tourism project cannot realistically be tracked. Tourism-related investments are widely dispersed throughout a local economy. They could involve renovating lodging rooms, adding capacity to a restaurant, starting a souvenir shop, or building a new gas station. No tracking mechanism could be expected to fully capture the number and scale of these investments.

ARC essentially considers leveraged private investment as a proxy for job creation and retention. The assumption is that the more private businesses invest, the greater the employment impact. An impact assessment methodology that more fully captured the employment impacts of ARC-funded projects would obviate the need to measure LPI. If additional local sales generated by ARC-funded projects could be estimated in a reasonably accurate manner, applying economic impact models that use sales data to estimate employment impacts could provide a more complete picture of these impacts. These models not only estimate direct employment but also the multiplier effect of indirect and induced spending. Indirect impacts result from the supply of local goods and services to businesses experiencing increased sales as a direct result of ARC projects, while induced impacts result from local spending by employees who benefit either directly or indirectly from these sales increases.

➤ **The Project Reporting Time Frame is Too Short to Fully Capture Employment Impacts**

Most of the outcome data received by ARC from grantees is through the final report, which is submitted within 30 days of the end of the project. Because of the nature of ARC's portfolio of tourism, cultural heritage and natural asset-related projects, few, if any, employment impacts have occurred by this time. At best, the reports can inform ARC about the extent to which activities contemplated in the proposal have been completed or progressed. For implementation projects, some initial data on increases in tourism levels or sales of local products may be available, but not enough to fully assess employment impacts. The nature of these projects also makes it difficult, if not impossible, to realistically project employment impacts three years out, as specified in ARC's definition of "jobs created." While ARC staff conducts validation visits for a small number of projects two or three years after project close-out, the sample is far too small to draw any inferences about the longer-term employment impacts of these projects.

Instituting post-project reporting requirements could at least partly address this problem, although at additional cost to grantees. In the case of implementation projects, methodologies described above could be put in place to measure employment impacts three years out. In the case of planning projects, the process would be more complex. For some planning projects, such as feasibility studies, determining whether a project had been implemented and estimating its employment impacts could be relatively straightforward. For other types of projects, such as strategic plans or resource inventories, the challenges would be greater. Grantees would have to identify the implementation activities that resulted from these plans, of which there could be several. Moreover, the implementers may be organizations other than grantees, which would increase the difficulty of obtaining useful data.

➤ **Impacts of Many ARC-funded Tourism Projects Cannot be Easily Isolated from Other Factors Influencing Visitation and Visitor Spending**

Additional tourism spending can be more easily attributable to some ARC tourism projects than others. Some projects support the development or improvement or “destination” attractions that motivate tourists to visit an area or extend their stays. These include major museums, performance venues, heritage trails, and recreational trails. Other projects fund the development of marketing tools such as websites and brochures that may also motivate tourists to visit an area by increasing awareness of its attractions and amenities. Established impact analysis methods can estimate the impacts of these types of projects if the appropriate visitation and spending data are collected.

However, there are many other ARC projects that, while contributors to an area’s tourism development, can’t easily be linked to additional visitor spending. Some of these projects involve improvements to small heritage sites or cultural facilities. These projects may contribute to a larger tourism development strategy and may incrementally enhance the tourism experience, but may not in themselves be responsible for a measurable amount of additional visitor spending. Other projects, such as way finding signage or information distributed to visitors who have already arrived in an area at visitor centers or other locations, may result in increased visitation to specific tourism attractions or tourism-related businesses, but again may be difficult to link with additional spending. Methods could be employed to track the role of these tools in directing visitors to specific sites and any spending that resulted, but it would be difficult to accurately assess their role in increasing overall visitor spending.

RECOMMENDATIONS FOR A NEW FRAMEWORK FOR MEASURING EMPLOYMENT IMPACTS

The issues raised above suggest that ARC should develop a new framework for measuring the employment impacts of its portfolio of tourism, cultural heritage and natural asset-related projects. They also suggest that a number of criteria should be applied in establishing this framework:

- ✚ Methods employed should be reasonably reliable and consistent.
- ✚ They should be designed to ensure that the impacts measured are attributable to the ARC project.
- ✚ They should be made as easy as possible to execute and proportionate to the grantee’s resources and the cost of the project.
- ✚ They should be tailored to the project type and stage of development.

ARC should take the following steps to put this new framework for employment impact measurement into place.

➤ Establish Standardized Practices to Assist Grantees with Impact Measurement

In order for data on employment impacts to be meaningful, ARC should adopt standardized practices for measuring job creation and retention and require grantees to

apply these practices. At the same time, ARC should provide grantees with technical assistance to ensure consistency and minimize grantee time commitments and cost.

As indicated earlier in this chapter, the most appropriate way to measure the employment impacts of ARC's tourism, cultural heritage and natural asset-related projects is to first measure increases in local revenues attributable to these projects, and then convert these numbers into employment equivalents using economic impact models. Methodologies for economic impact analysis are well established and, in the tourism realm, have been specially adapted to measure the impacts of cultural, heritage, and agricultural tourism projects. Other methods have been developed to measure the impacts of tourism marketing programs, including conversion and advertising tracking studies. And in recognition of the growing role of the Internet in tourism marketing, new methods are being developed and refined to measure the impacts of tourism marketing websites on visitation levels. These tools have been used extensively by academic researchers, government tourism agencies, and private consultants.

As one example, the National Park Service developed the Money Generation Model (MGM2) to estimate local economic impacts of National Park Visitors. The model has been made available to other organizations, using a simple fill-in-form for estimating economic impacts. It requires three basic inputs: 1) the number and types of visitors; 2) visitor spending patterns; and 3) local economic ratios and multipliers. Multipliers may be obtained from the MGM2 model or from other regional input-output models. A custom version of the model has been developed for use by heritage areas.

ARC should work with experts in the field to identify best practices in economic impact measurement applicable to its tourism, cultural heritage and natural asset-related projects, adopt a set of measurement methods, and assist grantees to apply these methods. It could take a number of steps to accomplish this:

- ✚ Providing publications and training seminars to grantees on economic impact measurement;
- ✚ Developing standardized survey instruments, interview protocols, and other data collection tools and providing instructions on data collection methods;
- ✚ Providing on-line access to an economic impact model that would calculate the employment impacts of ARC projects based on visitation and visitor spending data collected by grantees;
- ✚ Working with state tourism agencies that already collect tourism data to customize data collection for local areas;
- ✚ Creating a technical assistance fund that could be used by grantees to hire university researchers or consultants to assist with data collection and analysis.

Australia provides an example of how a federal government agency can assist local tourism organizations to conduct research on tourism impacts. Tourism Research Australia (TRA) has established a Destination Visitor Survey program, which involves collaboration between TRA and state and local tourism organizations. For each project,

TRA ensures a sound research design to deliver high quality data. The agency has developed a model for its Visitor Profile and Satisfaction Program that includes research design, fieldwork methodology, questionnaires, analysis, and reporting. This standardized model enables local organizations to minimize the cost and time normally taken to complete such projects.

➤ **Tailor Measurement Methods to Project Characteristics**

While measurement methods should be standardized, they should also be tailored to take into account different project types and time frames. Most, importantly, the impacts of implementation projects should be measured differently than those of planning projects. In general, *implementation projects* are expected to directly result in job creation and retention, while planning projects are one step removed. Consequently, impact measurement for implementation projects should focus on quantitatively measuring job creation and retention achieved as a result of project completion. For *planning projects*, the measurement process is two-fold. First it must be determined whether the outcomes of planning projects – studies or plans completed – result in projects or programs that are likely to generate employment impacts. If so, a second determination must be made about whether quantitative impact measurement is practical. For example, if a feasibility study results in the development of a destination tourism attraction, employment impacts can be quantified using established methodologies. On the other hand, if a tourism strategic plan leads to the implementation of several projects by multiple actors, quantitative impact measurement becomes more difficult. In such cases, ARC could develop information tools that would enable it to make a more qualitative assessment of employment impacts rather than attempting to fully quantify these impacts. For example, if certain projects are implemented as a result of a tourism strategic plan, and the implementers of some of those projects collect and analyze data suggesting additional visitation and tourism spending, ARC could reasonably conclude that some job creation has occurred although it would be unable to quantify the full employment impacts of the planning project.

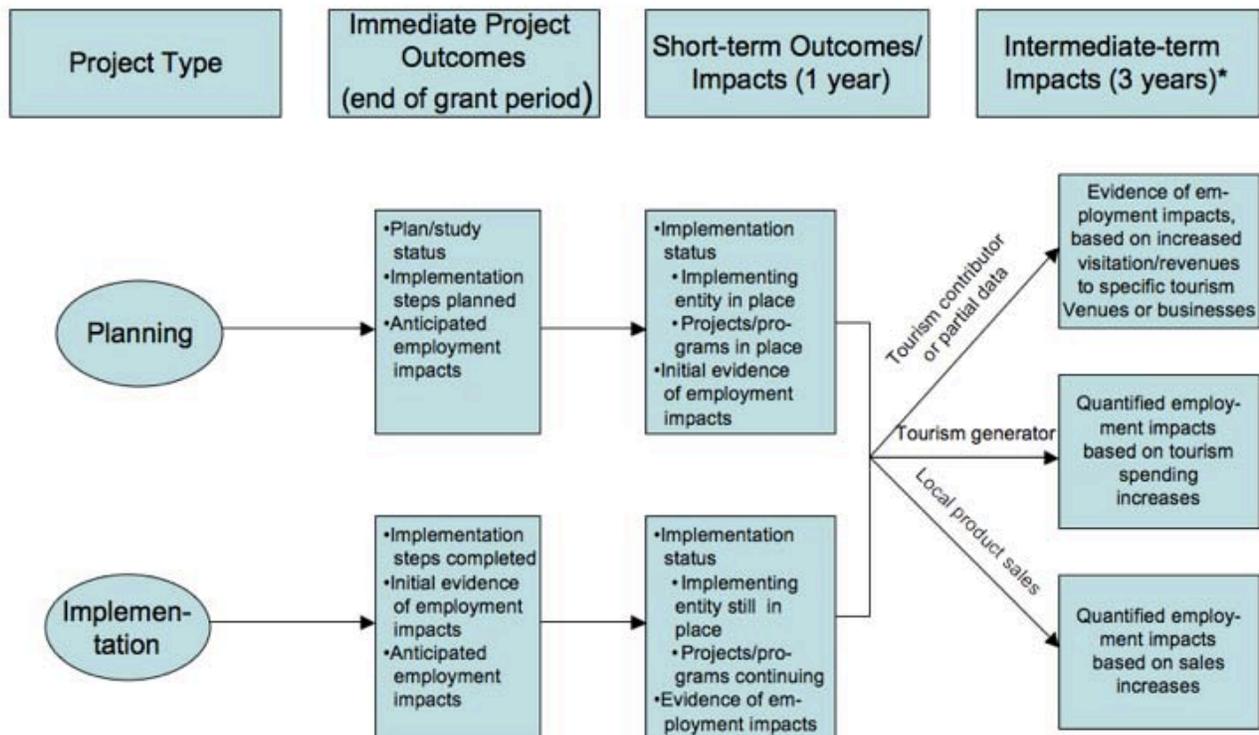
Another distinction should be made between tourism implementation projects that are “*tourism generators*” and those that are “*tourism contributors*.” As noted earlier in this chapter, some tourism implementation projects such as development or improvement of destination attractions or development of marketing tools can be considered tourism generators because they attract visitors to an area and generate additional spending. Other projects such as improvements to small heritage sites or cultural venues, development of way finding signage, or local distribution of tourism information are more appropriately considered tourism contributors because they enhance the visitor experience and may increase visitation to specific sites, but can’t easily be linked to overall increases in visitor spending. For such projects, ARC could develop information tools that focus on tracking visitation and spending at specific sites. Increased visitation and spending could be assumed to be at least partly attributable to the ARC project and could be considered evidence of some contribution to job creation or retention, although the impact could not be quantified. See Figure 6 for a graphical display of the process.

➤ **Require and Assist Applicants to Develop an Employment Impact Measurement Plan**

ARC should require all applicants to prepare an employment impact measurement plan as part of their project application. Application guidelines should articulate ARC’s expectations regarding impact measurement, with distinctions made between planning and implementation projects, and between tourism generator and tourism contributor projects. The plan should describe what impacts will be measured, what methods will be used, when it will be done, and who will be responsible for data collection and analysis. A budget line for impact measurement should be included in the project budget.

ARC should be prepared to assist applicants with this process. This should include providing publications and training seminars on impact measurement and introducing applicants to the tools available from ARC to assist with this task. ARC should also review the plan and suggest changes when necessary. Finally, ARC should be prepared to share any costs with the grantee.

Figure 6. Methods for Assessing Employment Impacts of Tourism, Cultural Heritage and Natural Resource Related Projects



*For planning projects, 3 years after implementation; for implementation projects, 3 years after project completion

➤ **Establish Post-grant Reporting Requirements**

As noted earlier, it is typically premature to measure the employment impacts of this group of projects at the end of the grant period. Final reports should instead focus on reporting outcomes that can serve as preliminary indicators of the nature and extent of employment impacts that might be expected within 1-3 years of project completion. In the case of planning projects, the final report should focus on whether the anticipated research or plan was completed, what, if any, implementation steps have been taken or are anticipated, and what employment impacts are expected to result within three years of implementation. In the case of implementation projects, the report should focus on what implementation steps have been completed, whether there is any initial evidence of employment impacts, and what employment impacts are expected to result within three years of project completion.

In order to obtain meaningful information on actual employment impacts, ARC should require grantees to submit post-grant reports at specified intervals, perhaps one and three years after project implementation. For planning projects, ARC may want to extend the reporting time frame to more fully capture the employment impacts of project implementation. The three-year reporting interval meshes with ARC's definition of job creation, which anticipates measurement of private sector jobs created within three years of project completion. This report would provide the results of the employment impact measurement plan described above. The one-year reporting interval would enable ARC to assess how the project is progressing and to determine whether ARC should intervene to assist projects experiencing particular challenges. This would be particularly relevant for planning projects that have not moved toward implementation, giving ARC the opportunity to take action to "protect" its planning investment.

Obtaining post-project reports is likely to be difficult if grantees have no incentive to provide them. ARC should consider ways to put such incentives into place, perhaps by executing separate contracts for impact assessment costs, to be paid upon submission and acceptance of the assessment report. Another option would be to keep the grant open for three years, withholding final payment until submission and acceptance of the assessment report.

AN EX POST FACTO ESTIMATE OF EMPLOYMENT IMPACTS

The project files provided by ARC indicated that the projects (those that are closed) generated 583 jobs. Those projects were initially projected by grantees, as reflected in their grant requests, to create 2,113 jobs. This suggests that projects actually create only one-quarter as many jobs as expected. This result seems to conflict strongly with the results of our fieldwork: surveys, interviews and case studies. While some projects failed or were less successful than expected, project directors overwhelmingly considered the projects successful. As we note above, 86 percent reported that the projects were completely or mostly successful.

Within this section we have described the difficulties grantees have in measuring employment impacts. These pitfalls bring into question the grantees reported employment impact estimates. We therefore examined ways to ex post facto determine a more accurate job estimate.

Our review of the interviews we conducted tell us that project managers often felt that employment impacts were significant but that they had no way of accurately estimating them. They reported that local restaurants indicated increases in business and hotels had higher occupancy rates but translating the anecdotal evidence into employment estimates was difficult. The interviews with economic development stakeholders sometimes reported employment increases but they were not always consistent with project manager numbers or estimates by other stakeholders. The methodological issues discussed in this section suggest that project managers are often not in a position to adequately estimate the impacts in any event.

The material earlier in this section describes the difficulties of estimating employment impacts and suggests the investigation of various impact models that can assist grantees and ARC in better estimating the full economic and employment impacts of projects. We therefore turned to other studies that used such models to see if they provide a way to generate a reasonable approximation of true employment impacts from the ARC tourism project portfolio we were provided.

Several analyses are available of impacts from tourism developments in Appalachia and similar regions but most deal with a specific, typically large and high profile project. Fortunately a recent study was done of a *portfolio* of projects within one area, specifically of the Crooked Road region of Virginia. ARC has provided funding for virtually all of the Crooked Road projects (mostly in tandem with other Federal, state, or local funds) and therefore provides a good test-bed for application to not only its investments in Virginia but to the overall ARC portfolio.

The 2008 study was conducted by Sustainable Development Consulting (SDC) and entitled *Economic Impact Assessment of the Crooked Road: Virginia's Heritage Music Trail*. The analysis was based on surveys and other data sources that estimated visitation, dollars spent, length of stay and other direct impacts. These data were then examined within the US Department of Commerce Regional Input-Output Modeling System (RIMS II). The RIMS II model is a widely utilized and respected model and is used in a broad array of economic impact analyses.

They estimated that the Crooked Road Music Trail generated \$22.8 million in annual revenue to the region and accounted for 445 full-time equivalent (FTE) jobs. How does this compare to the estimated impacts as reported by ARC grantees for the same portfolio of projects? The grantees reported that their projects generated 80 jobs or 18% of the estimated total reported by SDC. On the other hand the 445 FTE estimate is quite close to the initial projections made by the ARC grantees of 416.

The ratio of grantee job estimates to the estimates generated by a widely accepted economic model provides a means of estimating job impacts by the full portfolio package of ARC tourism, cultural heritage and natural asset-related projects. This model suggests that the actual job impacts for the ARC portfolio are 3,243, compared to the reported estimate of 583. This estimate is much closer to the survey-based estimate of 2,588 we developed in Section 3. These results strongly suggest that ARC investigate a practical implementation of an economic impact model such as RIMS II to more accurately reflect the success of its investments in Appalachia. Preferably the project managers would access an online model on a project-by-project basis. Alternatively ARC or an outside consultant could use a model to look at the recent portfolio of projects as a whole.

SECTION 5: SUSTAINABILITY & THE TRIPLE BOTTOM LINE

As noted, the Ford Foundation asked us to examine the application of Triple Bottom Line (TBL) strategies (defined as simultaneously building economic, social and environmental assets) to economic development projects, specifically projects that were built on tourism, cultural heritage and natural assets. The Ford project was conducted in tandem with this evaluation. Specifically, Ford is interested in applying the tenets of TBL using a four-pronged development strategy that uses cluster-based development, value chains, entrepreneurship, and financial services as a combined development model for TBL. They felt that the ARC work would provide a platform for building a better understanding of the opportunities and challenges for adopting a TBL perspective in rural areas including Appalachia.

In this section, we look to analyze how sustainable development and, more specifically, TBL can provide a logical platform for building stronger communities. We will describe the development of the triple-bottom-line from a tool that companies use to broadly describe their corporate impacts to a more general structure under which communities, organizations, funders and companies can develop and evaluate strategies that reflect concern for the holistic health of human action. In particular this report looks at the following questions:

- ✚ How can we use sustainable development as a launch pad for TBL?
- ✚ What has been the logical and theoretical development of TBL and what are its strengths and shortcomings?
- ✚ What metrics can be used to evaluate how initiatives impact economic, social and environmental elements?
- ✚ Can the metrics be effectively measured, verified and used to build better and more sustainable communities?
- ✚ How has TBL been used in the development of the portfolio of ARC projects?
- ✚ What methods can be used to help communities and organizations think about the TBL and build programs, strategies that reflect our mutual concern for a healthy, vibrant, equitable and sustainable future?

In addition to the detailed analysis of funded projects described in the sections above, the team also conducted significant research on the ways in which tourism projects have been traditionally evaluated and how the triple bottom line approach can be used to evaluate these types of projects. Two reviews of sustainability and TBL were prepared during this project, one by Michael Evans, Carol Pollard and James Stoddard of Appalachian State University and another by Scott Sawyer, an expert in the field of sustainability. Their efforts form a strong academic and theoretical underpinning for the following sections. The full reports are included as appendices but much of their work is reflected and summarized here.

TBL is built on the bedrock of sustainable development theory and practice. Before looking at TBL, which can be thought of as a subset of sustainability, we need to look

first at sustainability and its definitions. Appendix G, written by Scott Sawyer, provides a more thorough portrait for those who want to learn more of its history, development and theoretical and scientific underpinnings. Following the discussion of sustainable development, the section will turn to the triple bottom line. Both appendices F and G contain more detail on TBL and the literature surrounding its use.

SUSTAINABILITY AND SUSTAINABLE DEVELOPMENT

The concept of the triple bottom line originated from the notion of sustainability and sustainable development. Ecologically sustainable development (ESD) thinking was first espoused in the Brundtland Report (World Commission on Environment and Development, 1987) and reiterated during Agenda 21 and the Rio Declaration on Environment and Development (1992).

The Brundtland Report definition has become the standard:

“Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs.”

A more specific definition clarifies sustainability as:

“the use of natural resources to support economic activity without compromising the environment’s carrying capacity, which is its ability to continue producing those economic goods and services ” (Manning and Dougherty 1995)

As we have developed more complex social and economic organization we have moved to more resource extractive (non-renewable) methods to sustain these systems with the most obvious being our increasing reliance over time on non-renewable energy. We live in an economy that is built on exploitation of natural resources that are inherently finite.

Both of the above definitions point to the quandary faced by mankind: how do we exploit (or perhaps nurture) the natural environment and its resources without destroying the ecosystems and environmental services it provides? How do we use resources in ways that do not destroy the basis of our survival while at the same time dealing with issues of poverty, hunger, inequality, economic opportunity, health and governance?

The evidence is clear that much of what we call economic development including tourism development is unsustainable. As Sawyer notes we are changing our environment and ecosystems at an increasingly rapid rate and that most of our major ecosystems are being used unsustainably and appear to be on paths from which they may not recover without significant change in human behavior. Global warming may be just the most talked about these looming changes but there are other systems that may also be approaching collapse.

In addition the negative impacts of non-sustainable and exploitive economic development have tended to fall on those most vulnerable. For example one report notes that “Nearly all of the studies over the past two decades have found that environmental hazards under investigation are inequitably distributed according to race or income or both.” (Mohai 1995). Within the Appalachian region the negative environmental impacts of coal mining clearly fall on the poor neighbors of the mines.

Some analysts believe we are living in an economic and social system in which our primary focus on one part of the triple bottom line, *economy*, not only negatively affects the *social* and *environment*, but threatens even the economic element that drives it.

Amidst this doom and gloom Sawyer points out:

Sustainable development advocates believe that a less apocalyptic future is possible. In the specific example of energy, societies can only meet the needs of the present without compromising the ability of future generations to meet their needs by conserving energy, using it more efficiently, and through a switchover to renewable energy (e.g., wind, solar, geothermal, hydro, biomass, biofuels, ocean tidal, waste, etc.).

Unsustainable development, then, refers to societal dependency on an economic process - “the treadmill of production” - that requires increasing withdrawals of energy and material from ecosystems (and the generation of waste and pollution) in order to promote societal progress for some segments of society while further impoverishing other segments of society (Schnaiberg and Gould, 1994).

Ultimately this leads to the need to focus on an “interconnected core of principles that provide a kind of game plan for avoiding thresholds while defining the contours of sustainable development”:

Social and Environmental Justice: Advocates of social and environmental justice stress the need to promote opportunity and equity within our society, between societies, between generations, and between species.

Stewardship of Built and Natural Environment: Stewardship advocates invoke Aldo Leopold’s well known concept of the land ethic to stress the need to maintain the resiliency of life support systems such as forests in perpetuity (Hawken et al., 1999), while historic preservation advocates and others stress the need to maintain the fabric of communities.

Ecological Modernization: Advocates of ecological modernization, or natural capitalism (Hawken et al., 1999) stress the need to green societal institutions (e.g., economic institutions, political institutions) through changes in values, as well as changes in technology, such as biomimicry (Benyus, 1997), renewable energy, and cradle-to-cradle production processes (Mol and Sonnenfeld, 2000).

Examples of the differences between traditional and sustainable economic development are summarized in Table 10.

Table 10: Traditional and Sustainable Economic Development

| Sustainable Development | Economic Development |
|--|---|
| Renewable Energy: wind, solar, geothermal, hydro, biomass, biofuels, ocean tidal, or waste | Nonrenewable Energy: Fossil fuels, nuclear, CO ₂ emissions |
| Energy Efficiency / Conservation | Inefficiency / Waste |
| Ecological Design: green building, smart growth, New Urbanism, historic preservation | Sprawl: low density, car and oil dependent, |
| Sustainable Agriculture: locally produced, organic, CSAs | Industrial Agricultural: 3,000 mile salad, pesticides, synthetic fertilizers, consolidations |
| Sustainable forestry: FSC certification | Unsustainable forestry: deforestation, illegal logging |
| Localism: Employee ownership, livable wages, fair trade | Globalization: sweatshops, fossil fuel dependent |
| Environmental Studies: Ecological economics / Environmental Education / Environmental Sociology, etc. | Economics: “fallacies of misplaced concreteness” in “the market”, “invisible hand”, and indicators such as GDP |
| Ecotourism / Sustainable Tourism: local ownership, conservation, low visitor impacts | Tourism: corporate ownership, adverse social, cultural and, environmental impacts |

For more examples, visit Conservation Economy (<http://www.conservationeconomy.net>)

Source: Sawyer, Appendix G

Sustainable development, as a definition and goal, is not without its critics. It is accused of being inconsistent, vague, and too broad to be useful. While there are clearly differences in how *sustainable development* is being used as a construct, there can be little argument about the need for it. As Sawyer summarizes, the critiques have the “unmistakable odor of a red herring.”

PEOPLE, PLANET, PROFITS: DEVELOPMENT OF THE TRIPLE BOTTOM LINE

Unlike sustainable development, the triple bottom line began as a straightforward tool designed for businesses that wished to increase their business focus to more than just monetary profits. It is part of an overall move, mostly by large publicly held corporations, to institute *corporate social responsibility* or CSR into their business model. Companies that adopt CSR policies are expected to track and self-regulate their behavior in ways that look beyond short-term monetary gain.

There has been a significant development of “infrastructure” surrounding CSR. There are certification for companies to win, social accountability standards, an ISO 14000 environmental management standard, and a United Nations working group developing reporting and disclosure guidance.

Criticisms of CSR are many. Neoclassical economists claim that the sole role of corporations is to generate profits for stockholders. Others claim, with substantial evidence, that corporations use CSR as nothing more than a marketing tool and report only the good while burying the bad. Global corporations, including a majority of the world's largest oil companies, conduct and publicize annual CSR reports.

Others contend that while corporations may have ulterior motives, the adoption of CSR does provide a certain amount of transparency and a tool for stockholders to push corporations to more responsible practices. In addition, as we will discuss below, there is a solid single bottom line reason to adopt CSR: it may lead to a more profitable and sustainable business.

It is true that many organizations have adopted CSR as an accounting method or a slick public relations campaign and have overlooked the need to establish and follow a corporate philosophy in keeping with its intentions. However, when CSR is embraced to its fullest extent, it forces organizations to engage with their full complement of external stakeholders (e.g., customers, vendors, residents, non-profit activists).

TBL is a term often used to describe the *economic, social and environmental* accountability of a firm but it also used within a broader range of organizations including the public sector. A key element of corporate TBL requires that corporate performance should be geared not only to benefit its "shareholders" but all of its "stakeholders" including groups such as the local community within which business operations are conducted. In the same way, organizational or public sector TBL requires the integration of a broader range of people and issues. For example, the potential explicit adoption of TBL by the Appalachian Region Commission would require them to evaluate their projects on more than just jobs created, incomes increased and investments leveraged.

TBL Defined

The term "Triple Bottom Line" evolved in the mid 1990's when the consulting group AccountAbility coined the term which was later popularized by John Elkington (1998) in his book *Cannibals With Forks: The Triple Bottom Line of 21st Century Business*. The triple bottom line is a concept that expands the notion of organizational performance evaluation to include not only the traditional financial bottom line to one that also includes environmental quality and social justice. Others contend that the elements of the triple bottom line can be combined in pairs resulting in some of the popular terms used to describe sustainable projects. For example, *eco-efficiency* involves optimizing economic and environmental goals, *fair trade* is concerned with conducting economic activity with attention to social consequences, and *environmental justice* involves achieving social equity while respecting environmental protection. (Marshall and Toffel 2005)

From a corporate standpoint it is important to note that TBL was intended to be a way of thinking about corporate social responsibility, not just an accounting methodology. Elkington stressed the integration of philosophy and accounting measures in

implementing TBL and suggested that there are seven drivers that have emerged to support its use (Table 11).

Table 11: Drivers of the Triple Bottom Line

| Drivers | Characteristics |
|--|--|
| Markets | Unlike the past when business used competition as an excuse not to incur additional costs (for environmental and socially responsible behavior), future business will use TBL thinking to build a case for action and investment in environmental and social infrastructure. |
| Values | Society’s changing values towards more environmental and social consciousness will influence corporate culture. |
| Transparency | Organizations are facing growing international transparency about their environmental and social policies which is being facilitated by new societal value systems and radically different information technologies. |
| Life-Cycle Technology | There is a new emphasis on cradle-grave performance of products that examines product performance from extraction of raw materials through recycling or disposal. |
| Partners | New forms of partnerships are evolving among business organizations and campaigning groups (e.g., Greenpeace). |
| Time | Organizations are realizing that they must pay attention to long term rather than short term performance. |
| Corporate Governance | Top level organizational managers will be forced to pay attention to new issues such as the design of corporations and boards and their value chains of ‘business ecosystems.’ |
| (adapted from Elkington, J. (2004) “Enter the Triple Bottom Line”) | |

As Table 11 suggests, first-rate TBL uses relevant, common indicators to make it easier to compare performance or “value added” across organizations and requires honest, open and transparent disclosure. Ideally, it has been suggested that TBL should lead to improvements in corporate performance. TBL reports should include key goals for improving organizational performance into the future – preferably quantitative and time-bound goals. The Global Reporting Initiative, a program developed under the auspices of nearly 20 agencies including the World Business Council for Sustainable Development, the United National Environment Program and the World Resources Institute, standardizes TBL measures and areas to be reported and currently has more than 1,300 participating organizations. The GRI suggests five categories of TBL indicators (GRI 2008). These include:

1. Economic performance
2. Environmental performance
3. Social performance
4. Labor practices and “decent” work
5. Public policies and implementation measures

The Economic Dimension of TBL

Perhaps the easiest dimension to capture during triple bottom line evaluation is the economic dimension. The economic dimension can be assessed using traditional financial performance indicators such as sales revenue, profit, return on investment or shareholder value models. Other industry-specific measures are also readily available to assess the economic performance of an operation. For example, in the tourism industry, indicators such as heads in beds (for hotels) or visitation (for attractions) are popular measures. More difficult to assess are the social and environmental dimensions of the triple bottom line. These dimensions are discussed next.

The Social Dimension of TBL

It has been suggested that the social dimension of TBL, sometimes referred to as *social capital* consists of two components: human capital (employees, contractors, suppliers and advisors) and investment by the social systems that support the business (Dwyer, 2005; Sauvante, 2001). A leading authority on social capital, Robert Putnam (1993) describes social capital as the “trust, norms and networks needed to facilitate cooperation.” Others suggest that social capital is “created from a myriad of everyday interactions between people” and identify key dimensions such as valuing self and others; trust (interpersonal and generic); connection (community participation and social networks); multiple relationships; and reciprocity in relationships. Some social indicators suggested by the GRI include: employee retention rates; job satisfaction levels and investment per employee in illness and injury prevention.

Miller, Buys and Summerville (2007) provide an interesting example of the application of the social dimension. They developed a framework and indicators to assess the social dimension of the TBL for the Australian dairy industry. In their view, the social dimension involves social well-being, working with employees, their families, the local community, and society to improve their quality of life. Organizations with social awareness better understand and account for the consequences of their operations on the social well-being of the communities affected by those operations. Their framework specifies four dimensions of an operation’s social impact, including an 1) individual’s well-being, 2) community well-being, 3) employment experiences and satisfaction, and 4) organizational impact.

The Environmental Dimension of TBL

The environmental dimension is referred to by some as *natural capital*. For example, Onyx and Bullen (2000) and Schnake (1991) suggest that the availability of natural resources such as forests, minerals, fish and soil have long been taken for granted despite the fact that this is the “capital” upon which our existence depends (i.e., clean air and water). As Onyx (2000) so succinctly put it “wealth that destroys the basis of life is no wealth at all.” Environmental indicators suggested by the GRI include items such as total energy use, use of recycled materials and water sources significantly affected by an organization’s use of water. In effect companies and organizations need to self-internalize the externalities of their production.

CRITICISMS OF THE TBL METHODOLOGY

The critics of TBL and its value are many. Both appendices F and G provide a depth of technical detail on the issues so we provide a summary here. Categories of criticism include the following.

One critique notes that TBL focuses principally on controlling for bad effects and not necessarily enhancing the positive effects of products. Some propose a focus on the triple TOP line where the emphasis is on increasing the good effects and thus, by definition, eliminating the bad.

Others argue about measurement claiming that social and environmental bottom lines cannot be measured in objective ways (as can the economic bottom line) and therefore, it is not possible to compute something similar to a social or environmental net profit. In essence then, there is no common currency to allow for the expression of good and bad magnitudes with respect to the social and environmental bottom lines.

It is also argued that because of the difficulties of measuring social and environmental impacts corporations pick and choose those measures that put them in the best light. If there is no generally accepted set of measures, unlike for example the Generally Accepted Accounting Principles (GAAP), critics claim that there is no way to assure that the organization is giving a true accounting.

RESPONSES TO THE CRITICISM

While it is clear that the development of TBL as a concept and methodology is not mature, none of the issues above are insurmountable.

Proponents suggest organizations that support the use of triple bottom line metrics do not have to assess their social and environmental bottom lines the same way that their financial or economic bottom lines are assessed. In addition, they have pointed out that even the popular net income (profit) aggregate measure of financial performance was deemed a deficient indicator of financial performance. One need only look at the recent global economic and financial crisis to see that measuring profits is not a trivial act and that neither regulation nor GATT requirements were able to generate accurate assessments of company finances. Since financial performance cannot be summarized with a single objective number, one should not expect to assess social and environmental performance in this manner. It is also certainly true that organizational performance is multidimensional. (Pava 2007)

To summarize, some suggest that TBL is nothing new. However, TBL thinking may produce some useful and dependable indicators of societal and environmental indicators of “value added” in relation to corporate responsibility and accountability. Furthermore, an organization’s motivation to use TBL might also include its attempt to differentiate itself from its competition to attract investors and customers who might be willing to pay more to support ethical firms.

The main challenge associated with TBL remains measurement. The social and environmental measurement and comparability of organizations and industrial sectors over time is proving to be a very difficult task. As Norman and MacDonald (2003) point out, it is commonly understood that in modern management theory; “if you can’t measure it, you can’t manage it.” Current TBL measurement efforts are time-consuming, vague, sometimes badly misleading (i.e., public relations rhetoric) and can provide a smokescreen for poor performance.

As Sawyer notes the “gist of the triple bottom line argument is that social and environmental performance can be measured in fairly objective ways, and that firms should use these results in order to improve their social (and environmental) performance. Moreover, they should report these results as a matter of principle, and in using and reporting on these additional bottom lines firms can be expected to do better by their financial bottom line in the long run (Norman and MacDonald, 2004). The triple bottom line is seen as a metaphor to remind us that corporate performance is multi-dimensional (Pava, 2007)”.

Perhaps most importantly, there is strong logic and evidence that suggests firm adoption of TBL often *improves the financial bottom line*. If this is the case then firms might adopt TBL and have substantial incentives to develop real and accurate measurements across the spectrum of people, planet and profit. Sawyer summaries 13 potential avenues through which TBL can strengthen the financial bottom line. More detail is found in Appendix G.

1. **Anticipating the inevitable**, for example foreseeing regulatory change resulting from environmental harm, helps corporations get ahead of the competition
2. **Better reputation management** is believed to lead to easier hiring of the best talent and higher retention of top talent.
3. **Increased employee productivity** and worker creativity may occur when employees work in a cleaner and healthier environment.
4. **Reducing risk** of product liability and major environmental disasters leads to easier financing and greater credibility with banks and other financial institutions.
5. **Reduced costs** by reducing material use and building stronger locally/regionally based supply chains
6. **Reducing (and recapturing) energy expenditures** lowers costs.
7. **Making money from prevention** (design, consulting, green architecture, etc.) as well as making money from cutting-edge environmentally-relevant research and development.
8. **Reducing the costs of waste handling and disposal** and turning wastes into inputs and outputs.
9. **Making money from clean-up** (e.g., environmental mitigation, restoration, and research and development on new environmental technologies).
10. **Maintaining market shares** with old customers who want more environmentally friendly products as well as creating new distribution opportunities to new customers who are more environmentally sensitive.

11. **Building new centers of technical expertise** in the firm that can turn into new profit centers.
12. **Diffusing learning and efficiencies** (via energy savings, waste reduction, new supply chain connections, process innovations, etc.) within the firm.
13. **Building synergies** that develop with new products, production processes, trade alliances, supply chain expansion, etc., once a critical mass of sustainable business activities are underway and linked with one another.

The case for using TBL as a means to improve the financial bottom line will, of course, vary substantially from sector to sector and business to business.

UTILITY OF TBL FOR EVALUATION OF TOURISM DEVELOPMENT PROJECTS

Do the 13 bottom line impacts from the adoption of TBL apply to sustainable tourism? What benefits accrue to the tourism organization for implementing within a TBL framework?

Dwyer (2005) provided insight into the benefits that accrue to the tourism development organization resulting from the adoption of the TBL approach. Included in these benefits are efficiencies and cost savings, improved market positioning, better stakeholder relations, improved strategic decision making along with benefits to the wider community.

With regard to efficiencies and cost savings, TBL reporting can identify potential cost savings such as reduced operating costs via the reduction of materials and energy use, enhanced operational and design efficiencies, recycling and reusing wastes, as well as reduced transportation storage and packaging costs. Lower compliance costs may result if regulators have a better understanding of an organization's operations. Human resource costs may be reduced when employees are attracted and retained by an organization that focuses on community and environmental values. Finally, capital costs may be reduced as the organization has improved access to "green" and "ethical" investment funds.

From a marketing perspective, tourism development organizations can benefit from adopting the TBL approach through improved market positioning. Improved market positioning can result when the organization's brand image is enhanced when consumers become aware of the environmental and social sensitivity of the organization. In addition, the competitive differentiation afforded by the TBL approach can assist the organization in appealing to new markets, and encouraging repeat visitation.

Enhanced tourism development organization stakeholder relationships can result as the organization's beneficial activities permeate throughout the community fostered by increased transparency. These enhanced relationships can also provide a competitive advantage as the organization's positive reputation is communicated among stakeholders strengthening the organization's brand.

Finally, adopting the TBL approach can improve a tourism development organization's strategic decision making. The TBL approach forces the organization to focus on managing those tasks that get measured, systematize the best practices and benchmarks, improve risk management activities, improve the quality of information for decision makers, and facilitate information sharing throughout the organization which promotes integrated decision making within the organization and with other organizations in the community.

As we note there are unique sets of sustainability issues faced by different industrial sectors such as the automotive, banking and tourism sectors, among others. For these reasons, to use TBL to evaluate sustainable tourism, it is necessary to explore TBL in the particular context of sustainable tourism. The next section ties together TBL with sustainable tourism and describes potential variables that can measure TBL within this industry.

SECTION 6: TBL & SUSTAINABLE TOURISM

There are of course a myriad of industries within rural America. For the purposes of this effort in collaboration with the ARC, we look at the application of TBL and TBL measures to the portfolio of ARC tourism, cultural heritage and natural asset-related projects provided to the RTS project team. (For brevity we will use the term “tourism” to refer to these projects.) As we suggested in the previous section we will look at the TBL measures and methods that are applicable to it. Some of these measures will translate to other sectors while others are unique to tourism. The process, though, should provide a guidebook for looking at other sectors and their particular TBL issues.

LINKING TBL, SUSTAINABILITY AND SUSTAINABLE TOURISM

The concepts of TBL, sustainability, sustainable development and sustainable tourism are closely linked. As Manning and Dougherty (1995) suggest, sustainable tourism is the best way to preserve the “golden goose” of tourism. They feel it is a viable tool to maintain and enhance a destination’s competitiveness. It is suggested that sustainable tourism and development finds a balance between economic prosperity, environmental protection and social equity.

Sustainable Tourism Defined

For our purposes, sustainable tourism refers to a level of tourism activity that can be maintained over the long term because it results in a net benefit for the social, economic, natural and cultural environments of the area in which it takes place.

Sustainable tourism is often used as an umbrella concept, under which terms, such as eco-tourism, heritage and cultural tourism, and agri-tourism, may fall. Each sub-sector suggests unique measures relevant to analysis using the TBL framework. Here we take a different tack, by looking at rural tourism (using the portfolio of ARC projects) and describe how they might be effectively examined or measured using a TBL framework. We will look at tourism in the same way we might look at an auto plant except the variables of interest will differ. We want to answer the question “How does this tourism asset work from the standpoint of people, planet and profit and how can we make it sustainable?”

Developing Measures of TBL for Sustainable Tourism

As stated earlier, one of the most challenging aspects of implementing TBL is the difficulty associated with developing meaningful economic, social and environmental indicators. Of these, the greatest challenge is associated with attempting to quantify social and environmental impacts. Analysts suggest that, in assessing tourism impact, the initial question when considering appropriate indicators must be “what should the tourism and recreation industry sustain?” followed by a need to identify indicators that can be monitored to determine if current policies are facilitating sustainability taking into consideration the context in which they exist.

The following discussion describes general areas of indicators with the three elements of TBL. After that we will describe the specific measures within these general areas.

Economic Indicators. Economic measures of tourism are the most straightforward to establish and have long been in place. Typically, economic impact is measured by hotel occupancy rates, number of nonresident visitors, per capita tourist expenditures and lodging revenues, number of tourism employees and income from tourism. Others have developed indicators focused on employment issues, destination economic benefits seasonality and poverty alleviation. A comparison of the economic indicators that emerged from previous research is shown in Table 11.

Table 11: Review of Economic Indicators of Tourism Impact

| Theme | Indicators |
|-------------------------------|---|
| Seasonality | Degree of seasonality |
| | Strengthening Shoulder Seasons and Low Seasons |
| | Provision of sufficient infrastructure year-round |
| | Short-term and seasonal employment |
| Employment | Number and quality of employment in tourism sector |
| | Professional and personal development |
| | Contentment from work |
| | Lack of skilled labor |
| | Labor income |
| Destination Economic Benefits | Business investment in tourism |
| | Tourism revenue |
| | Community Expenditures |
| | Net Economic Benefits |
| | Changes in cost of living |
| | Financial rate of return to operators |
| | Gross operating surplus of different tourism industry sectors |
| | Hotel occupancy rates |
| | Number of nonresident visitors |
| | Amount of money leaving tourism locality |
| Poverty Alleviation | Stabilizing and improving community income |
| | Improving local employment opportunities |
| | Achieving equitable distribution of tourism funds/benefits across the community |
| | Number and type of development programs in place |
| | Community survey assessment of usefulness and success of various development programs |
| | Evaluating less tangible, non-economic, livelihood priorities |

Social Indicators. As discussed previously, social impact is a term that is closely linked with the concept of social capital, i.e., improving trust, encouraging cooperation and

collaboration, recognizing and enhancing individual and organizational networks and fostering life-long learning (Rogers, 2003).

To date, research has suggested a number of social impacts of tourism on communities. These include state of the local economy, maturity of the tourism destination and level of community attachment. Other suggested social indicators fall into broad categories of support for access and equity, pressure on services, pride and sense of belonging to local area, support for cultural and artistic endeavors, regional showcase and community health and safety issues. A detailed comparison of the social indicators that have emerged from previous literature is shown in Table 12.

Table 12: Review of Social Indicators of Tourism Impact

| Theme | Indicators |
|--------------------|---|
| Background | Resident population |
| | Visitors to the Area |
| | Land use, Particularly Tourism Development |
| Social Environment | Access, especially parking |
| | Highway traffic count |
| | Housing Affordability |
| | Business Success |
| | Safety in the Community |
| | Crowding |
| | Tourism Development |
| | Resident attitudes towards tourism |
| | Pressure on Health and Social Services |
| | Pressure on Police |
| | Number of Complaints by local residents |
| | Positive Participation in Community Activities |
| | Change in Character of Local Community Such as Development of Local Community Groups |
| | Maintenance of Cultural Heritage Through Enhancement of Attractions |
| | Resident perceptions of quality of life |
| | Cultural Development: events (number and type) |
| | Increased Awareness of Destination (Increased Visitation) |
| | Increased Awareness of Destination (New Investment/Business Opportunity in the Region) |
| | Change in Crime Patterns |
| | Change in Social Problems (e.g., alcohol, drugs) |
| | Malnutrition |
| | Family Support |
| | Education and Training |

It is interesting to note, however, that to date no widely accepted method of measuring social capital in tourism has been developed.

Environmental Indicators. Environmental indicators suggested by researchers are varied. Some analysts recommend measures that focus on energy use, water use, greenhouse gas emissions and ecological footprint. Others have generated a more complete list, for example, the most recent list generated by the World Tourism Organization (2004) who polled 62 experts from more than 20 countries, is the most comprehensive resource on this topic. Their list includes management of natural resources (waste, water, energy, etc.), climate change, visual impact of tourism and measuring the impact of tourism on the natural environment. A comparison of environmental indicators that have emerged from previous research are listed in Table 13.

Table 13: Review of Environmental Indicators of Tourism Impact

| Theme | Indicators |
|--|--|
| Tourism as a Contributor to Nature Conservation | Measuring impact of tourism on natural environment |
| | Financing for biodiversity conservation and maintenance of protected areas |
| | Site-specific regulations |
| | Provision of opportunities for participation by tourists in conservation |
| | Intensity of use |
| | Managing scarce resources |
| | Greenhouse gas emissions |
| | Water availability and conservation |
| Limiting Environmental Impacts of Tourism Activity | Sewage treatment |
| | Solid waste management |
| | Water pollution |
| | Air pollution |
| | Controlling Noise Levels |
| | Managing Visual impacts of Tourism |

While Tables 5-8 provide a useful starting point for applying TBL to tourism, they do not, in most cases, provide the detail on actual measures that can be used in evaluation. For example, what does it mean to evaluate “water pollution” in this case? What specific metrics are available to truly judge a project’s impact on water pollution?

Based upon the previous literature review, a set of 115 items were adapted from *Indicators of Sustainable Development for Tourism Destinations: A Guidebook* (WTO 2004). Of the 115 items adopted, 53 items were thought to measure the social bottom line; 23 items were thought to measure the environmental bottom line, and 39 items were thought to measure the economic bottom line. Additional detail on this process is found in Appendix F.

After the items were identified, they were submitted to the Advisory Panel (Appendix A) to generate a smaller, more useful and appropriate set of indicators. The advisory members were provided with the following definitions for each of the TBL dimensions:

The Economic Dimension: Refers to the financial 'revenue' shared by all commerce but also includes the additional economic benefits enjoyed by the host society.

The Social Dimension: Sometimes called social capital or community well-being, refers to the human capital provided by employees, contractors, suppliers, and advisors as well as investment in the social and cultural systems that support an organization.

The Environmental Dimension: Sometimes called natural capital, refers to the availability of natural resources upon which society's existence depends.

The panel members were asked to place the 115 items into one of four categories, the economic dimension, the social dimension, the environmental dimension, and a fourth "none of the above" category.

Combining the panel's expertise with the information gleaned from the team's research we ended up with 92 items in the scales, 20 that measure the economic dimension, 44 that measure the social dimension, and 28 that measure the environmental dimension. Tables 14-16 present the final TBL indicators that resulted from this process.

Returning to the case of "water quality" we see (Table 13) that water consumption, recapturing and reuse of water and sewage treatment are explicit metrics that can be measured.

Table 14: Final TBL Economic Indicators

| | |
|----|--|
| 1 | Degree to which the project impacts the number of people from outside the local community taking tourism jobs in the past year |
| 2 | Degree to which the project impacts local community natural resource management programs |
| 3 | Percent of jobs provided by the project that are less than six months per year |
| 4 | Degree to which the project impacts the local community via tourism taxes |
| 5 | Opportunities for promotion for employees of this tourism development project |
| 6 | Degree to which the project impacts low seasons |
| 7 | Degree to which the project impacts the local community's income |
| 8 | Percentage of jobs provided by the project that are full-time jobs |
| 9 | Total number of jobs provided by this tourism development project |
| 10 | Months per year the project operates |
| 11 | Percent of jobs provided by the project that are full-year |
| 12 | Yearly revenue of this tourism development project |
| 13 | Asset value of this tourism development project |
| 14 | Employee retention rate of this tourism development project |
| 15 | Average total local tourist spending at this tourism development project |
| 16 | Degree to which the project impacts employee family income |
| 17 | Degree to which the project impacts local employment opportunities |
| 18 | Per person fees charged for this tourism development project |
| 19 | Income levels of employees of this tourism development project |
| 20 | Degree to which the project impacts the operation and support of micro, small, and medium sized enterprises (MSMEs) |

Table 15: Final TBL Social Indicators

| | |
|----|---|
| 1 | Degree to which the project impacts local satisfaction with tourism |
| 2 | Degree to which the project impacts the number of tourism complaints by local residents |
| 3 | Degree to which the project impacts community social services |
| 4 | Degree to which the project impacts local community development programs |
| 5 | Degree to which the project impacts community participation rate in tourism |
| 6 | Degree to which the project impacts the local community's cultural values |
| 7 | Degree of local skilled labor for this tourism development project |
| 8 | Degree to which the project impacts the local community's physical security |
| 9 | Degree to which the project impacts the preservation of the local culture |
| 10 | Degree to which the project impacts the local community's educational programs |
| 11 | Degree to which the project impacts residents continuing with local customs |
| 12 | Degree to which the project impacts residents continuing with local language |
| 13 | Degree to which the project impacts locals continuing with local music |
| 14 | Degree to which the project impacts locals continuing with local cuisine |
| 15 | Degree to which the project impacts cultural activities |
| 16 | Degree to which the project impacts affordable housing for local residents |
| 17 | Degree to which the project impacts the local community's health management programs |
| 18 | Degree to which the project impacts the number of local residents that left the community last year |
| 19 | Frequency of employee training programs for this tourism development project |
| 20 | Degree to which the project impacts net migration in/out of the local community |
| 21 | Degree to which the project impacts local community food security |
| 22 | Degree to which the project impacts the number of complaints by community residents regarding tourism |
| 23 | Degree to which the project impacts conserving local cultural sites |
| 24 | Degree to which the project impacts the local community in conserving local monuments |
| 25 | Degree to which the project impacts the local community by minimizing damage to local heritage sites |
| 26 | Degree to which the project impacts the maintenance and preservation of local cultural/heritage sites |
| 27 | Percentage of employees of the project that are qualified/certified/degreed |
| 28 | Degree to which the project impacts the local community's poor |
| 29 | Degree to which the project impacts the local community by enforcing local alcohol regulations |
| 30 | Degree to which the project impacts tourist behavior near children's play areas |
| 31 | Degree to which the project impacts local education programs on substance abuse |
| 32 | Degree to which the project impacts local health programs for substance abuse |
| 33 | Degree to which the project impacts childcare facilities for workers |
| 34 | Degree to which the project impacts family-friendly work shifts |
| 35 | Degree to which the project impacts training programs for local residents |

Table 15 Final TBL Social Indicators, continued

| | |
|----|---|
| 36 | Degree to which the project impacts work programs for local residents |
| 37 | Degree to which the project impacts the number of crimes involving tourists |
| 38 | Degree to which the project impacts pressure on local health services |
| 39 | Degree to which the project impacts pressure on police |
| 40 | Degree to which the project impacts the number of local community groups |
| 41 | Degree to which the project impacts local senior citizens |
| 42 | The degree to which the project impacts community sports programs |
| 43 | The degree to which the project impacts community festivals and events |
| 44 | The degree to which the project impacts community wellness centers |

Table 16: Final TBL Environmental Indicators

| | |
|----|---|
| 1 | Degree to which the project impacts local effluent treatment facilities |
| 2 | Degree to which the project impacts the local community by supporting local noise regulations |
| 3 | Degree to which the project impacts the local community by supporting local congestion regulations |
| 4 | Degree to which the project impacts a smoke free environment |
| 5 | Degree to which the project impacts local community's ability to provide drinking water |
| 6 | Degree to which the project impacts local community conservation programs |
| 7 | Degree to which the project impacts suppliers' waste management activities |
| 8 | Degree to which the project impacts the number of local environmental assessment projects |
| 9 | Degree to which the project impacts the number of local conservation projects |
| 10 | Degree to which the project impacts the number of local protected areas |
| 11 | Degree to which the project impacts local environmentally friendly modes of transport |
| 12 | Degree to which the project impacts local environmentally friendly waste disposal methods |
| 13 | Degree to which the project impacts local noise pollution |
| 14 | Degree to which the project impacts opportunities for tourists to practice conservation (recycling, etc.) |
| 15 | Degree to which the project impacts local ordinances to minimize environmental impacts |
| 16 | Degree to which the project impacts energy consumption |
| 17 | Degree to which the project impacts local use of renewable energy sources |
| 18 | Degree to which the project impacts local greenhouse gas emissions |
| 19 | Degree to which the project impacts local water consumption |
| 20 | Degree to which the project impacts local recapturing and reuse of water |
| 21 | Degree to which the project impacts sewage treatment in the local community |
| 22 | Degree to which the project impacts solid waste disposal in the local community |
| 23 | Degree to which the project impacts air pollution in the local community |
| 24 | Degree to which the project impacts noise pollution in the local community |
| 25 | Degree to which the project impacts the local visual landscape |
| 26 | Degree to which the project impacts the loss of open land in the local community |
| 27 | Degree to which the project impacts public open spaces such as parks |
| 28 | Degree to which the project impacts suppliers' waste management activities |

SECTION 7: THE ARC PROJECT PORTFOLIO & THE TBL

Section 2 above described analysis of the ARC funded projects based on an online survey of project managers and stakeholders. Here we will quickly re-look at the results from the standpoint of TBL implications.

As we noted above, when asked about the impacts of the projects, most respondents reported moderate to strong impacts on tourism-related items: new tourism, cultural and visitor facilities. Tables 17 and 18 below reproduce parts of Tables 1 and 2 from Section 2 highlighting impacts that are most relevant to the broader view of impacts practiced under TBL analysis. Note that we have removed some of the traditional economic measures that are a focus of the present ARC evaluation system. These measures are relevant in a TBL framework.

From a TBL standpoint some projects affected enhancements in conservation, environmental infrastructure, open space, and water or energy conservation (Table 17). Table 18 reflects limited impacts on social and environmental dimensions such as poverty, health and pollution. As we noted above, these results are explained by two factors: project design did not include or consider environmental or social features; and ARC has other funding programs specifically targeted to infrastructure and other environmental issues.

From both tables it is clear that the cultural assets are the most common impacts that fall squarely into the TBL framework. This is not surprising since many of the projects are based on the music, art, crafts, history and buildings – the cultural assets that provide the tourism draw. Conservation and visual landscape also are often affected as many projects improve the natural and built environment.

Table 17: To what extent did the project result in the development, expansion, or enhancement of the following?

| Project Impacts | Moderate to Great Impact | No or Small Impact | Don't Know |
|--------------------------------------|--------------------------|--------------------|------------|
| Cultural facilities and events | 51% | 10% | 2% |
| Local conservation activities | 22% | 39% | 10% |
| Amount of public open space | 18% | 53% | 6% |
| Environmentally-friendly transport | 16% | 61% | 14% |
| Infrastructure (e.g., water & sewer) | 8% | 63% | 6% |

Table 18: What impact did the project have on the following?

| Impact Category | Positive Impact | Slight Impact | No Impact | Don't Know |
|-----------------------------------|-----------------|---------------|-----------|------------|
| Preservation of cultural heritage | 64% | 21% | 2% | 13% |
| Visual landscape | 47% | 11% | 30% | 13% |
| Population retention or growth | 11% | 30% | 40% | 19% |
| Poverty reduction | 9% | 28% | 47% | 17% |
| Water conservation | 6% | 2% | 70% | 21% |
| Air and water pollution reduction | 6% | 4% | 66% | 23% |
| Resident health | 4% | 6% | 62% | 28% |
| Energy conservation | 4% | 15% | 57% | 23% |

The interviews we conducted also revealed some aspects of TBL issues and impacts from the ARC projects. As noted in Section 2, some projects positively affected collaboration and environmentally friendly development. Case studies also reflected a basic understanding of TBL issues and positive and negative TBL issues within ARC projects.

Clearly ARC project managers and stakeholders within their rural communities have some inherent understanding of the importance of including social and environmental dimensions and of broadening the evaluation of the economic dimension to more than just jobs. This suggests that there would be value in explicitly recognizing TBL as an appropriate method to evaluate ARC projects as well as other similar projects and initiatives. The question then becomes “How do we put a TBL perspective and evaluation system in place in rural America?”

ARC has recently funded projects that explicitly target TBL outcomes. Interestingly a project conducted by the Conservation Fund of North Carolina directly applies a straightforward method to implement TBL thinking into rural communities. The project, “Creating Asset-Based Economies in Western North Carolina” is described thusly:

“TCF’s Resourceful Communities Program (RCP) proposed to expand the Creating New Economies Fund (CNEF), providing small grants of up to \$15,000 to local agencies and/or nonprofit organizations for community-driven, asset-based development initiatives that generate economic, social and environmental (“triple bottom line”) returns-on-investment.”

The following section describes this model that has been applied in rural communities within North Carolina.

SECTION 8: A MODEL FOR IMPLEMENTING TBL IN ARC PROJECTS

The Conservation Fund of North Carolina (The Fund) was awarded an ARC grant to build a program, “Creating Asset-Based Economies in Western North Carolina,” to provide small seed-money grants, up to \$15,000, to community organizations in the ARC region of the state to develop programs and initiatives built on the framework of TBL. The Fund had received previous funds from other organizations to implement the program in other parts of the state. This means the system has been tested in two of the disadvantaged rural areas of America, Appalachia and the Southeast Crescent Black Belt¹.

The project employs two basic strategies with the first of greatest interest in this discussion:

- 1) **Small grants** to support “triple bottom line” projects that build a base of community support for entrepreneurship; and
- 2) **Asset-based lending program** that provides technical assistance and loans for start-up and expansion of natural resource-based businesses.

Strategy 1 is of greatest relevance here. The program has two features of direct interest to our purposes.

The first is that it is intentional in nature; organizations must demonstrate that their proposed project integrates TBL as a basic operational goal. The process begins with the project’s mission and vision and then follows with goals, objectives, outputs and outcomes – and all reflect the commitment to TBL. At no time do the project leaders turn to each other and say “Okay now we do that TBL thing.”

As we saw in Section 2, many ARC projects in the tourism portfolio had TBL implications and the project managers and stakeholders understood and implicitly hoped for outcomes that addressed social and environmental concerns. It is particularly interesting that many of the comments we heard reflected that *social and environmental issues either helped or sometimes hindered the success of the project*. In other words TBL was dragged into the process, not as forethought, but as an unforeseen driver of

¹ The Black Belt is a region of the southeastern United States. Although the term originally describes the prairies and dark soil of central Alabama and northeast Mississippi, it has long been used to describe a broad region in the American South characterized by a high percentage of African Americans. Communities in the Black Belt commonly face acute poverty, rural exodus, inadequate education programs, low educational attainment, poor health care, substandard housing, and high levels of crime and unemployment. While African American residents are disproportionately affected, these problems apply broadly to all ethnic groups in the Black Belt. There are various definitions of the region and its boundaries, but it is generally considered a band through the center of the Deep South, stretching from as far north as Delaware to as far west as eastern Texas. (http://en.wikipedia.org/wiki/Black_Belt_%28U.S._region%29, accessed August 24, 2009)

success or failure. The TBL was unavoidable even if it was not planned as part of the project's scope.

Second, the project requires and instills a collaborative, continual training and learning process that integrates evaluation. Grant applicants and recipients are required to attend workshops (the Fund pays basic travel and per diem expenses) in which they learn the basic elements of TBL as an explicitly integrated goal of action and go through a rigorous but straightforward group exercise that takes them through the steps of building an evaluation system. The evaluation system is instilled not simply as a reporting mechanism but as a fundamental part of the project. Evaluation is not seen as an add-on in this process. The evaluation process is used to drive stakeholder involvement, build excitement, guide action and help the organization recognize and correct problems that inevitably come up. Evaluation is a *value-added* instead of an unnecessary drain on time, money and resources.

The required project workshops are part of the Fund's [*Resourceful Communities Program*](#)². The workshops are built on a manual, *Measuring a Movement: Evaluating Outcomes in Community Sustainable Development*, which takes individuals through the complete process of developing and implementing their evaluation program (Gamble, et al, 2005). The process has seven steps outlined in the manual's table of contents:

- Step 1: Getting started with participatory evaluation
- Step 2: Define the outcomes you want to measure
- Step 3: Identify & select indicators to measure program outcomes
- Step 4: Collecting indicator information
- Step 5: Putting the evaluation process in place
- Step 6: Analyze and report your findings
- Step 7: Using your findings

This makes clear that the organization must be intentional, participatory, and explicit about the evaluation. The workshop also instills the idea that TBL evaluation is a valuable management tool that actually increases project impacts and organizational effectiveness. The evaluation process is shown to be an upfront *investment* in time and resources that more than repays for itself during the project lifecycle. In that way it is completely consistent with the discussion in Section 5 of the bottom line impacts of TBL on private sector organizations. TBL as an organizational focus becomes an important management tool.

The *Measuring a Movement* process is not a panacea. It is designed for small community-based organizations. It is not a tool for companies though much of the material is relevant. (As noted above the project does include a lending program for commercial ventures and there are projects that build on both elements of the program.)

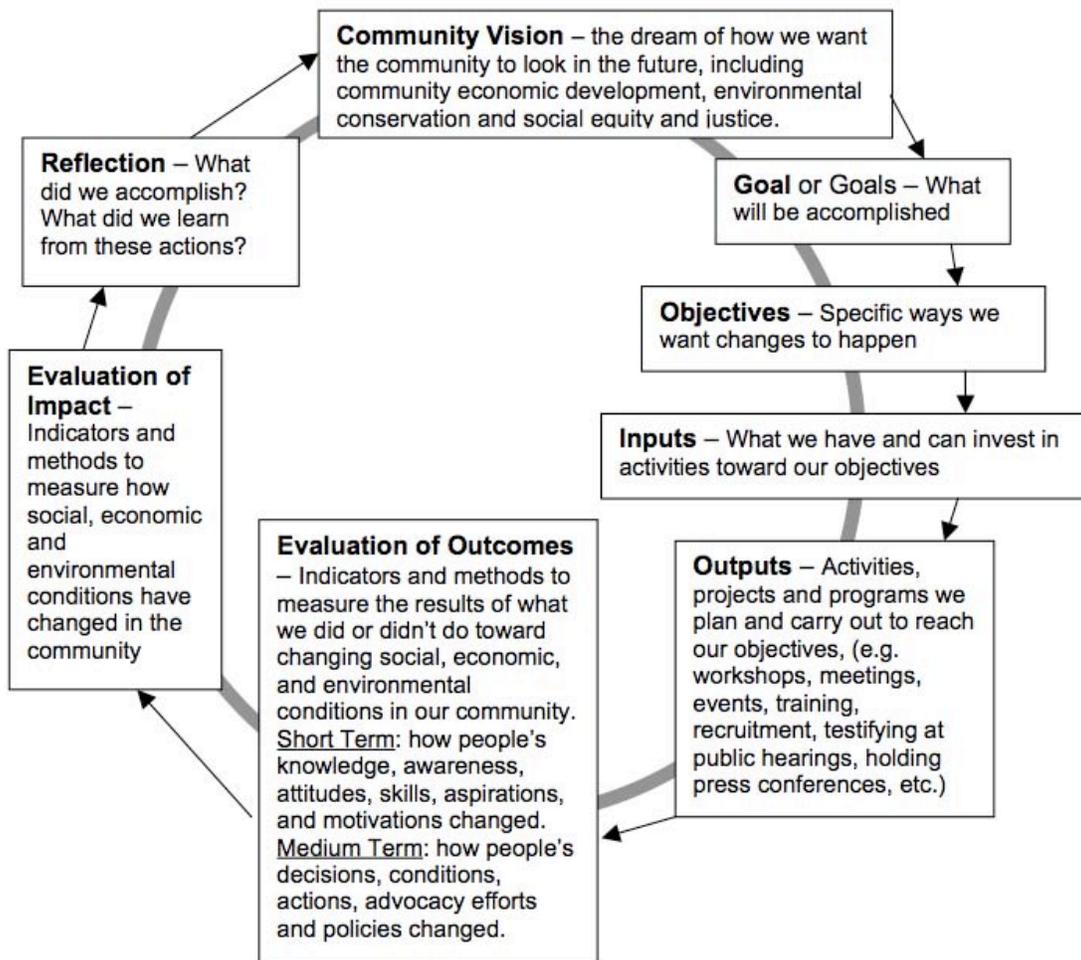
² <http://www.resourcefulcommunities.org/>

The **community development model** presented in the manual is instructive. At the top we see the *Community Vision* that explicitly includes community economic development, environmental conservation and social justice and equity. It also focuses attention on the fact that the process is not a step but is fully integrated where the *Reflection* element feeds back into a possible reexamination of the *Community Vision*.

Operationalizing the process is completed using a **logic model** (shown on the following page) that takes the continuous circular model and provides the practical structure for implementation. It addresses the “who, what, how, and when?” questions as well as the fundamental “how did we do in the short, medium- and long-term?”

We spoke with the Fund staff to get a more nuanced view on how the process works. We asked whether it was difficult for the organizations to modify or push their proposed projects to mold them to the TBL framework. Unexpectedly the staff reported that not only were individuals able to quickly articulate TBL aspects and goals but that the give-

Continuous Community Sustainable Development Model²
 The Relationships among Community/Organizational Issues, Goals, Objectives, Inputs, Outcome Evaluation/Documentation, and Reflection

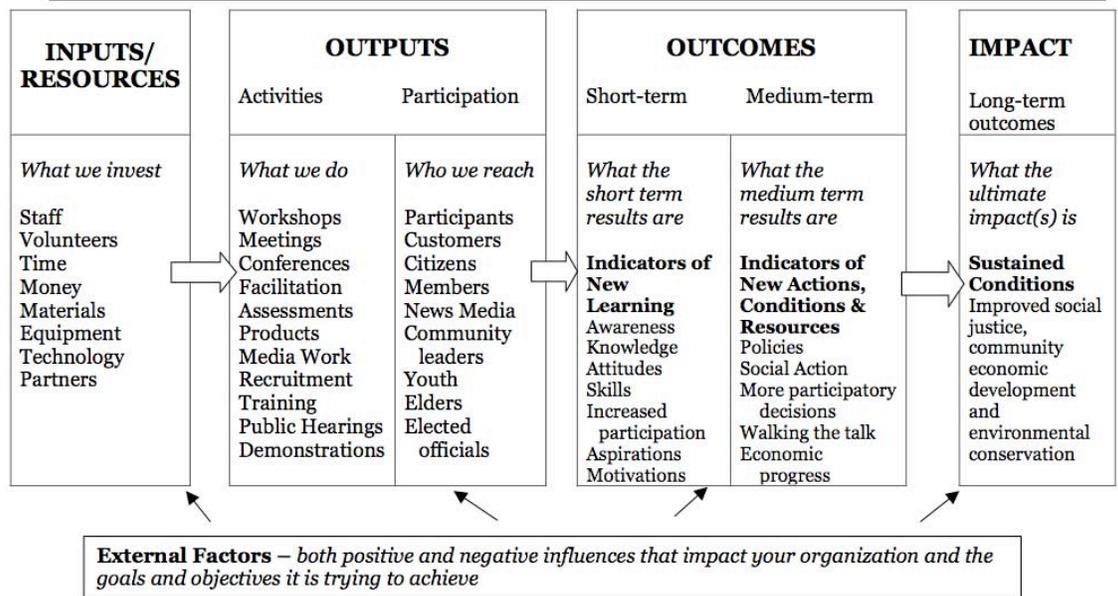


and-take within the workshop process helped others to think about how their projects could impact their communities in economic, social and environmental ways they had not realized.

One of the key parts of this program is that recipients are required (and funded) to return for workshops during the project funding cycle. The Fund staff report that these sessions become great methods to demonstrate what is working, what is problematic and how others have dealt with unforeseen issues. It becomes a collaborative learning process that builds and transfers expertise.

LOGIC MODEL: How it works

Program: name of the program you have chosen to evaluate first
Goal: statement of what will be accomplished by this program
Objective(s): how the organization or program will accomplish this goal (method, activities, timeframe)



RECOMMENDED NEXT STEPS

The Conservation Fund program is not the only way to operationalize TBL into organizations receiving grants but it does provide an excellent building block for thinking about next steps for ARC to develop an explicit platform for building Appalachian Triple Bottom Line initiatives. The Conservation Fund program involves a level of handholding, training and workshops that may be unrealistic for an ARC-wide implementation.

A program to integrate TBL perspectives into projects will require changes from the standpoint of both ARC and grant recipients. It will require that both ARC staff and project managers add expertise and knowledge about new measures and evaluation procedures. ARC staff and grantees will need to work together to agree on the appropriate goals and metrics that, in addition to the traditional employment, income and investment metrics, provide a means to understand projects more holistically. Lastly adding new measures and evaluation missions could add a additional administrative burden that takes away from the practicalities of getting a project off the ground and managing it to a successful result. These burdens will fall on both ARC staff and grantees.

It should be noted that TBL impacts are often only realized over a longer-term time scale. While all involved realize that change often occurs slowly, the administrative and contractual system for projects is a stumbling block for a longer-term project view. ARC and grantees work under project open and closing schedules, reporting periods and financial agreements. It is unclear how integrating a longer-term perspective can be reconciled with the traditional management structure though we suggest options in Section 5 above.

We believe a practical program can be built. The skeleton of the process is outlined in the seven steps described above. ARC does not need to be involved in all parts of the process but two elements will be critical:

An explicit acknowledgment by ARC of the relevance of TBL

ARC must be upfront in adopting the Strategic Plan's suggestion that project success often goes beyond the traditional measures of employment, income and investment. While these traditional impacts provide the backbone for improving the lives and livelihoods of the people of Appalachia, they do not represent the complete picture.

Within this acknowledgment ARC will need to clearly define the *why* and *how* of the TBL. This might include the development of a series of straightforward background guidance documents or manuals. The guidance can be developed using much of the language and research found in this document as well the straightforward materials used by the Conservation Fund in its work.

Communicating a set of potential impacts and measurement options

The surveys, interviews and case studies we conducted, along with the Conservation Fund project experience, clearly show that grantees implicitly understand that the work

they do within Appalachian communities impacts and is impacted by economic, social and environmental circumstances. Most grantees are used to thinking in terms of jobs, income and investment. Not only must they be assured that broader goals are acceptable, but they will need assistance in making the transition to a TBL perspective.

A key element is a “cheat sheet” of potential TBL impact measures and measurement methods for those impacts. Sections 7 and 8 of this report, the support materials in the appendices and the Conservation Fund’s Resourceful Communities Program can form the basis for this guidance.

SUMMARY

Adoption of a TBL perspective is clearly consistent with the strategic goals of ARC. Adding TBL to program evaluation could have significant impact on how projects are envisioned and conducted and broaden the view of grantees to include more holistic development options. Fully integrating social and environmental considerations into projects will not be without upfront costs but the benefits are likely to outweigh the costs and help build a stronger Appalachia.

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Appendix A. Advisory Panel Members

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APPENDIX A: ADVISORY PANEL MEMBERS

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Appendix B. Online Survey Instrument

Thank you very much for participating in this survey. All of your responses will be kept confidential.

* 1. On a scale from 1 to 5—with 1 being not at all and 5 being completely—to what extent did the project achieve its goals?

1 Not at all 2 3 4 5 Completely

* 2. Has the project been closed out by ARC?

Yes No

* 3. Did the project result in the implementation of any new initiatives such as a program, organization, informational tool, or facility development or improvement?

Yes

No

* 4. To what extent are these initiatives still in place or in use? Please use a scale of 1 to 5, with 1 being not at all used and 5 being completely in use.

1 Not at all used

2

3

4

5 Completely in
use

5. If these initiatives are not completely in place or in use, please explain

* 6. To what extent did the project result in the development, expansion, or enhancement of the following?

| | Not at all | A little | Moderately | A great deal | Don't Know |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| Support for small businesses and entrepreneurs | <input type="radio"/> |
| Support for local agriculture | <input type="radio"/> |
| Education and training programs | <input type="radio"/> |
| Tourism attractions | <input type="radio"/> |
| Visitor facilities and services | <input type="radio"/> |
| Community facilities and services | <input type="radio"/> |
| Cultural facilities and events | <input type="radio"/> |
| Local conservation activities | <input type="radio"/> |
| Local environmental infrastructure (e.g., water & sewer) | <input type="radio"/> |
| Amount of public open space | <input type="radio"/> |
| Recreational facilities | <input type="radio"/> |
| Use of environmentally-friendly modes of transport | <input type="radio"/> |

* 7. What impact did the project have on the following?

| | Negative Impact | No Impact | Slightly Positive Impact | Moderately Positive impact | Strongly Positive Impact | Don't Know |
|---|-----------------------|-----------------------|--------------------------|----------------------------|--------------------------|-----------------------|
| Employment opportunities | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Quality of jobs | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Employment of high-skilled labor | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Tourism revenues | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Sales of locally-produced items | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Household incomes | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Poverty reduction | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Population retention or growth | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Resident health | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Preservation of local cultural heritage | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Visual landscape | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Energy conservation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Water conservation | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Air and water pollution reduction | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

* 8. In what way and how frequently have you measured these impacts?

* 9. If you had additional funds, how would you measure these impacts differently?

10. As part of this survey process, we would like to contact individuals or organizations that were impacted by your work. In the following spaces, please identify and if possible, provide contact information for people outside your organization who either played a role in your project or were impacted by your work. For example, you could give the name of a local hotel operator who saw an increase in visitors or the name of a local community group that helped you publicize your organization.

1st stakeholder (name, organization and contact info)

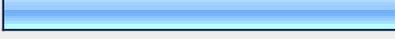
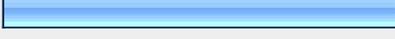
2nd stakeholder (name, organization and contact info)

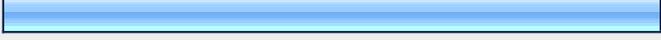
3rd stakeholder (name, organization and contact info)

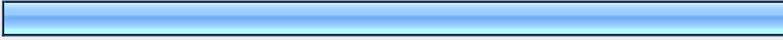
* 11. The answers you have given in this project will be confidential. However, in order to categorize responses we are asking individuals to give their name and the name of the organization they are representing. Please do so in the following space.

Thank you very much for completing the survey. If you have any questions, please contact Chris Beacham or Dan Broun at Regional Technology Strategies, Inc., 919-933-6699

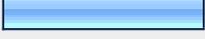
Appendix C. Online Survey Analysis

| 1. On a scale from 1 to 5—with 1 being not at all and 5 being completely—to what extent did the project achieve its goals? | | | Response Percent | Response Count |
|--|--|--|--------------------------|----------------|
| 1 Not at all | | | 0.0% | 0 |
| 2 |  | | 3.9% | 2 |
| 3 |  | | 9.8% | 5 |
| 4 |  | | 43.1% | 22 |
| 5 Completely |  | | 43.1% | 22 |
| | | | <i>answered question</i> | 51 |
| | | | <i>skipped question</i> | 0 |

| 2. Has the project been closed out by ARC? | | | Response Percent | Response Count |
|--|--|--|--------------------------|----------------|
| Yes |  | | 72.5% | 37 |
| No |  | | 27.5% | 14 |
| | | | <i>answered question</i> | 51 |
| | | | <i>skipped question</i> | 0 |

| 3. Did the project result in the implementation of any new initiatives such as a program, organization, informational tool, or facility development or improvement? | | | Response Percent | Response Count |
|---|--|--|--------------------------|----------------|
| Yes |  | | 86.5% | 32 |
| No |  | | 13.5% | 5 |
| | | | <i>answered question</i> | 37 |
| | | | <i>skipped question</i> | 14 |

4. To what extent are these initiatives still in place or in use? Please use a scale of 1 to 5, with 1 being not at all used and 5 being completely in use.

| | | Response Percent | Response Count |
|---------------------|--|--------------------------|----------------|
| 1 Not at all used |  | 9.4% | 3 |
| 2 |  | 12.5% | 4 |
| 3 |  | 12.5% | 4 |
| 4 |  | 21.9% | 7 |
| 5 Completely in use |  | 43.8% | 14 |
| | | <i>answered question</i> | 32 |
| | | <i>skipped question</i> | 19 |

5. If these initiatives are not completely in place or in use, please explain

| | | Response Count |
|--|--|--------------------------|
| | | 14 |
| | | <i>answered question</i> |
| | | 14 |
| | | <i>skipped question</i> |
| | | 37 |

6. To what extent did the project result in the development, expansion, or enhancement of the following?

| | Not at all | A little | Moderately | A great deal | Don't Know | Response Count |
|--|---------------------------------|-----------------|-------------------|---------------------|-------------------|-----------------------|
| Support for small businesses and entrepreneurs | 8.2% (4) | 18.4% (9) | 30.6% (15) | 36.7% (18) | 6.1% (3) | 49 |
| Support for local agriculture | 53.1% (26) | 16.3% (8) | 12.2% (6) | 8.2% (4) | 10.2% (5) | 49 |
| Education and training programs | 20.4% (10) | 12.2% (6) | 26.5% (13) | 38.8% (19) | 2.0% (1) | 49 |
| Tourism attractions | 2.0% (1) | 10.2% (5) | 16.3% (8) | 69.4% (34) | 2.0% (1) | 49 |
| Visitor facilities and services | 16.3% (8) | 20.4% (10) | 16.3% (8) | 46.9% (23) | 0.0% (0) | 49 |
| Community facilities and services | 22.4% (11) | 22.4% (11) | 26.5% (13) | 26.5% (13) | 2.0% (1) | 49 |
| Cultural facilities and events | 10.2% (5) | 18.4% (9) | 20.4% (10) | 49.0% (24) | 2.0% (1) | 49 |
| Local conservation activities | 38.8% (19) | 22.4% (11) | 16.3% (8) | 12.2% (6) | 10.2% (5) | 49 |
| Local environmental infrastructure (e.g., water & sewer) | 63.3% (31) | 14.3% (7) | 14.3% (7) | 2.0% (1) | 6.1% (3) | 49 |
| Amount of public open space | 53.1% (26) | 18.4% (9) | 10.2% (5) | 12.2% (6) | 6.1% (3) | 49 |
| Recreational facilities | 36.7% (18) | 18.4% (9) | 20.4% (10) | 22.4% (11) | 2.0% (1) | 49 |
| Use of environmentally-friendly modes of transport | 61.2% (30) | 14.3% (7) | 8.2% (4) | 2.0% (1) | 14.3% (7) | 49 |
| | <i>answered question</i> | | | | | 49 |
| | <i>skipped question</i> | | | | | 2 |

7. What impact did the project have on the following?

| | Negative Impact | No Impact | Slightly Positive Impact | Moderately Positive impact | Strongly Positive Impact | Don't Know | Response Count |
|---|--------------------------|-------------------|--------------------------|----------------------------|--------------------------|------------|----------------|
| Employment opportunities | 0.0% (0) | 12.8% (6) | 34.0% (16) | 38.3% (18) | 8.5% (4) | 6.4% (3) | 47 |
| Quality of jobs | 0.0% (0) | 21.3% (10) | 31.9% (15) | 38.3% (18) | 2.1% (1) | 6.4% (3) | 47 |
| Employment of high-skilled labor | 2.1% (1) | 46.8% (22) | 25.5% (12) | 10.6% (5) | 4.3% (2) | 10.6% (5) | 47 |
| Tourism revenues | 0.0% (0) | 8.5% (4) | 23.4% (11) | 23.4% (11) | 34.0% (16) | 10.6% (5) | 47 |
| Sales of locally-produced items | 0.0% (0) | 17.0% (8) | 29.8% (14) | 23.4% (11) | 19.1% (9) | 10.6% (5) | 47 |
| Household incomes | 0.0% (0) | 34.0% (16) | 34.0% (16) | 19.1% (9) | 0.0% (0) | 12.8% (6) | 47 |
| Poverty reduction | 0.0% (0) | 46.8% (22) | 27.7% (13) | 8.5% (4) | 0.0% (0) | 17.0% (8) | 47 |
| Population retention or growth | 0.0% (0) | 40.4% (19) | 29.8% (14) | 10.6% (5) | 0.0% (0) | 19.1% (9) | 47 |
| Resident health | 4.3% (2) | 57.4% (27) | 6.4% (3) | 2.1% (1) | 2.1% (1) | 27.7% (13) | 47 |
| Preservation of local cultural heritage | 0.0% (0) | 2.1% (1) | 21.3% (10) | 21.3% (10) | 42.6% (20) | 12.8% (6) | 47 |
| Visual landscape | 2.1% (1) | 27.7% (13) | 10.6% (5) | 36.2% (17) | 10.6% (5) | 12.8% (6) | 47 |
| Energy conservation | 4.3% (2) | 53.2% (25) | 14.9% (7) | 2.1% (1) | 2.1% (1) | 23.4% (11) | 47 |
| Water conservation | 4.3% (2) | 66.0% (31) | 2.1% (1) | 4.3% (2) | 2.1% (1) | 21.3% (10) | 47 |
| Air and water pollution reduction | 4.3% (2) | 61.7% (29) | 4.3% (2) | 6.4% (3) | 0.0% (0) | 23.4% (11) | 47 |
| | answered question | | | | | | 47 |
| | skipped question | | | | | | 4 |

| 8. In what way and how frequently have you measured these impacts? | | Response Count |
|--|--------------------------|----------------|
| | | 47 |
| | <i>answered question</i> | 47 |
| | <i>skipped question</i> | 4 |

| 9. If you had additional funds, how would you measure these impacts differently? | | Response Count |
|--|--------------------------|----------------|
| | | 47 |
| | <i>answered question</i> | 47 |
| | <i>skipped question</i> | 4 |

| 10. As part of this survey process, we would like to contact individuals or organizations that were impacted by your work. In the following spaces, please identify and if possible, provide contact information for people outside your organization who either played a role in your project or were impacted by your work. For example, you could give the name of a local hotel operator who saw an increase in visitors or the name of a local community group that helped you publicize your organization. | | | |
|--|--------------------------|------------------|----------------|
| | | Response Percent | Response Count |
| 1st stakeholder (name, organization and contact info) | <input type="text"/> | 100.0% | 38 |
| 2nd stakeholder (name, organization and contact info) | <input type="text"/> | 89.5% | 34 |
| 3rd stakeholder (name, organization and contact info) | <input type="text"/> | 71.1% | 27 |
| | <i>answered question</i> | | 38 |
| | <i>skipped question</i> | | 13 |

11. The answers you have given in this project will be confidential. However, in order to categorize responses we are asking individuals to give their name and the name of the organization they are representing. Please do so in the following space.

| | | Response Count |
|--|--------------------------|----------------|
| | | 46 |
| | <i>answered question</i> | 46 |
| | <i>skipped question</i> | 5 |



Appendix D. Interview Protocols for Program Managers and Stakeholders

Questions for Individual Program Managers at ARC

We might we want to start by asking questions about specific case study candidates. We can forward a list to each of the managers so they can offer specific comments.

1. What are the most common goals of tourism related projects?
2. How are these goals measured?
3. What measures are grantees required to report? How do these compare to project goals?
4. What is the internal ability of most project recipients to do self-evaluation?
5. What would help you better evaluate the impact of these projects?
6. Are there any projects that you have worked with those incorporate triple-bottom-line goals?

Broader group discussion

1. What are the most common challenges that these types of projects face?
2. Are there any unique approaches to addressing these challenges? Or any things that have been particularly effective?
3. What are the most realistic measures for these grantees to be attempting to gather?
4. What might be mechanisms that could be put in place to facilitate realistic collection?
5. Are there qualitative measures that could be used in a systematic way?
6. What are your thoughts about using the triple bottom line measures in these type of projects?

Questions for Stakeholders

1. What was your role in the project?
2. Were you involved in setting the goals for the project? What was your understanding of the goals of the project?
3. What has been the impact of the project on your organization?
4. How have you measured that impact? What do you think the regional impact has been?
5. If the project has closed, what has happened since the project?
6. What do you think were the biggest challenges facing the project's implementation? What do you think were the biggest impediments to success?
7. Has the project been successful? How would you measure that success? How would you suggest the project's outcomes be measured?
8. Has the project had any triple-bottom line impacts?
9. Are there organizations in your region that cover these triple-bottom line elements?

Appendix E. Case Studies

ATWOOD LAKE RESORT RENOVATIONS

PROJECT DESCRIPTION

ARC awarded a grant of \$200,000 to the Muskingum Watershed Conservancy District in 2003 to pay for a portion of the renovation of the Atwood Lake Resort and Conference Center in Carroll County, Ohio. The resort, Carroll County's largest private employer and only major lodging facility, has 123 lodging units, meeting space for up to 350, an 18-hole golf course, and other recreational facilities. The resort current employs 50 year-round workers and 100 seasonal workers.

The Conservancy District, the owner of the resort, is a political subdivision of the state of Ohio established in 1933 to create a flood-reduction system for the Muskingum River Watershed in southeastern Ohio. The district covers 18 counties, 16 of them in the Appalachian region. The development of the flood-reduction system resulted in the creation of 10 permanent reservoirs, including the Atwood Reservoir. In 1940, the Conservancy District added recreation to its mission. In addition to the resort, the District has developed a large number of recreational areas and facilities throughout the Muskingum Watershed, including parks, campgrounds, and marinas. While owned by the District, the resort is managed through a contract with a hotel management firm.

The ARC funding supported three components of the project: 1) bringing the facility into compliance with the Americans with Disabilities Act (ADA), primarily by installing an elevator to provide access to guest rooms and meeting space; 2) installing new windows to make the facility more energy efficient; and 3) improving the facility's public spaces. The total cost of these three components was \$2.5 million.

The total cost of the renovations was \$4.5 million. The additional \$2 million was used for improvements to the resort's overnight guest accommodations and administrative offices. Other sources of funding included a \$250,000 grant from the state of Ohio and \$4.1 million in general revenue bonds issued by the Conservancy District.

The projected outcome of the project was the retention of the resort's 50 full-time jobs and the creation of 10 additional jobs over a five-year period.

PROJECT IMPLEMENTATION

During the 35 years after the resort's initial construction, the Conservancy District upgraded its water and sewer systems, acquired an adjacent golf course and other adjacent property, and invested in additional recreation facilities. However, it did not undertake any substantial renovations of the facility's guest rooms, meeting rooms, or public spaces. By the early 1990s, the facility had become rundown, outdated, and inefficient. In addition, the facility was out of compliance with the Americans with Disabilities Act because its guest rooms and meeting facilities were not handicapped accessible. This was particularly detrimental to its meeting bookings. As a result, the

resort experienced steadily declining patronage during the 1990s and early 2000s. A consultant's report commissioned by the District in 2001 concluded that under its current conditions, the resort could potentially operate for only another three to five years before facing the need to make serious operating decisions regarding number of employees and level of services offered.

The District responded by developing a renovation plan. It planned to cover most of the costs by issuing its own bonds, but sought grant funding from other sources to reduce its debt burden. In 2001, it received a \$250,000 appropriation from the state's capital budget. Then, in 2002, it approached ARC for additional grant funding. ARC had provided funding for the resort twice in the past: in 1965, during the resort's initial construction, for an access road; and, in 1975, for an upgrade to the resort's water treatment plant.

Before formally requesting ARC funding, the District submitted the proposal for review to the Ohio Mid-East Government Associates (OMEGA), the local development district that rates grant proposals to ARC, and briefed tourism, economic development, and local government officials in the region. OMEGA strongly recommended the project to ARC, and all of the 10 counties represented by OMEGA submitted letters of support. According to OMEGA's current chair, while the organization does not usually recommend tourism projects, it did so in this case because of the wide support the project received and its important regional impact. ARC funding was approved in July 2003 and the renovations were completed by the end of that year.

The ARC funding comprised less than 5 percent of project costs and was probably not absolutely essential to project completion. However, provision of grant funding did reduce the Conservancy District's financial burden. The District received no tax revenues at that time and, thus, had to rely almost entirely on earned revenues to fund its operations and debt service. Its revenue consisted primarily of fees charged for use of its recreational facilities and income from land leases for natural-resource-based activities such as forestry, agriculture, and oil and gas extraction. Moreover, the resort had run an operating deficit for most of its history. The grant funding from ARC and the state enabled the District to somewhat reduce the level of bond financing required for the project, lowering its debt service and, thus, the annual subsidy required to keep the facility in operation.

PROJECT OUTCOMES

Regional economic development and tourism officials agree that the renovations have greatly improved the appearance, comfort, and accessibility of the resort. This is borne out by significant growth in bookings since the renovations were completed. Annual room occupancy rates have climbed from 38 percent in 2004, the year after the renovations were completed, to a projected 42 percent in 2008 (based on current booking trends). Use of meeting facilities has also increased significantly. Catering revenues from meetings have grown steadily from \$480,000 in 2004 to \$625,000 in 2007, an

increase of 30 percent. The improvements to the meeting facilities have enabled the resort to increase bookings for small corporate meetings and family events such as weddings and reunions. This has included expanding its off-season business when occupancy rates have traditionally been very low. As a result, group revenues have actually surpassed transient revenue (from unaffiliated visitors). Major feeder cities for group business are Cleveland, Akron, Youngstown, and Pittsburgh.

Despite these improvements, the resort continues to run an operating deficit, requiring ongoing subsidization by the Conservancy District. The resort's manager estimates that occupancy rates would have to reach 50 percent for the resort to break even on an operating basis.

The resort is clearly a critical source of support for the tourism economy in Carroll County and the surrounding region. As noted, it is the only full-service resort in the county. In fact, the county has only six other lodging facilities other than campgrounds—five bed and breakfasts and a recently constructed 43-room limited service motel with no recreational amenities. Surrounding counties have additional lodging facilities, but few full-service resorts. Tourism is a major component of the region's economic base and second only to agriculture in Carroll County according to local tourism and economic development officials.

In addition to attracting visitors to the region, the resort is a primary contributor to the region's tourism marketing infrastructure. According to the director of the Carroll County Convention and Visitors Bureau (CVB), the resort generates approximately 75 percent of the county's room tax revenue. Half of this, currently approximately \$60,000, is allocated to the Convention and Visitors Bureau for tourism marketing. In addition, the resort has its own four-person marketing and sales staff and a marketing budget that exceeds the CVB's. It is responsible for virtually all of the county's marketing to groups.

Tourism officials in surrounding counties recognize the importance of the resort as a regional tourism attraction because of the limited number of resort properties with comparable features in the region. While there is no formal regional tourism marketing organization, local tourism officials view tourism as regional in scope, with different parts of the region offering their own unique attractions. In this context, more guests at the resort translate into more visitors to surrounding counties. This is why local tourism organizations such as the convention and visitors bureau in adjoining Tuscarawas County include the resort in their marketing packages.

The resort is also an important source of support for local government functions. The other half of the county room tax revenues it generates are allocated to the Village of Dellroy, where the resort is located, to fund village operations.

The renovations did not result in increased employment at the resort. Current employment is 75 year-round workers, 43 of whom work full-time, and 75 seasonal workers, about the same as before the renovations. However, the renovations ensured the retention of workers who may have lost their jobs had they not been undertaken. While

the jobs are not high paying, they are relatively high quality compared to other available jobs in the area. There is little turnover of year-round employees. Seasonal summer jobs are an important source of employment for high school and college students, and even attract some school teachers and retirees.

While the project did not have any explicit social or environmental objectives, it did appear to generate positive outcomes with regard to these two elements of the “triple bottom line.” In terms of environmental outcomes, the project has helped to preserve open space by maintaining the operations of the resort, a critical source of support for the region’s recreational tourism base. This has reduced pressures to promote more intensive forms of development. The Conservancy District is highly sensitive to environmental sustainability and has established policies that maintain the environmental quality of the land under its jurisdiction. It promotes resource-based uses and low-impact recreational activities. Economic development officials note that maintaining open space is consistent with the desires of the majority of area residents, who highly value the region’s rural character.

In terms of social outcomes, the project has maintained and enhanced meeting facilities that are heavily used by local and regional organizations. There are no other comparable spaces within Carroll County and a limited number in surrounding areas. By providing space for business, civic, and social organizations to meet and conduct business, the resort helps to maintain the organizational capacity that builds social capital.

MEASUREMENT ISSUES

It can reasonably be argued that the project led to the retention of all of the jobs at the resort, since the resort’s survival appeared problematic had the renovations not been undertaken. The role of ARC funding is less clear, however. Given ARC’s small financial role in the project, it is likely that the renovations would have proceeded without ARC support, although possibly with some reduction in scope.

While the ARC funding application indicated that the project would result in the creation of ten new jobs, direct employment at the resort did not increase. No effort has been made to estimate indirect job creation or retention from the project. This could be done by calculating the number of visitor-days spent at the resort, applying available data on non-lodging visitor spending, and using an economic impact model to estimate total indirect spending and employment. Expenditures resulting from an increase in visitor-days after the renovations would translate to new job creation. The state of Ohio has developed a model to estimate direct and indirect spending and employment resulting from tourism at the county level, and this model could likely be adapted to estimate the project’s indirect impacts.

BROOME COUNTY AGRI-TOURISM AND MARKETING PROJECT

PROJECT DESCRIPTION

ARC awarded a grant of \$24,206 to the Cornell Cooperative Extension in Broome County, New York, in 2003 for an initiative to strengthen the county's agriculture industry through diversification and the development of agri-tourism. The total cost of the project was \$96,697. The \$72,491 local match included \$68,991 of in-kind support from the grantee and \$3,500 from the Broome County Chamber of Commerce.

The initiative had several components:

1. Providing training and technical assistance to farmers in agri-tourism, marketing, product diversification, and business planning and promotion. This would include a six-week training program to be attended by an estimated 200 farmers and one-on-one technical assistance to an estimated 40 farmers.
2. Forming three producer purchasing and/or marketing groups.
3. Developing agri-tourism and direct-to-consumer marketing tools. This would include creating and distributing an agri-tourism marketing brochure, promoting tour packages to motor coach tour owners resulting in an increase from 10 to 25 tours per year, creating a countywide logo for agricultural products, and installing agri-tourism signage.
4. Creating and distributing a five-year comprehensive agri-tourism development plan.

The initiative was expected to result in an increase of 50 percent in direct sales from farmers to consumers, the expansion of 50 percent of existing agri-businesses to include agri-tourism and/or an alternative enterprise, the creation of 25 new agri-businesses, and the creation of 20 new jobs.

PROJECT IMPLEMENTATION

The Cooperative Extension had been working on agricultural diversification efforts since the mid-1990s. A major catalyst was consolidation in the dairy industry, which had long dominated Broome County agriculture. As the scale of investment and complexity of management required for a dairy farm to achieve profitability increased, some dairy producers expanded their operations and some others sold their holdings and left the industry. Others who wanted to remain in agriculture began to explore opportunities to diversify into other agricultural products.

The ARC-funded project evolved out of discussions between the Extension and owners and operators of farm markets about the need to better cross-promote each other and develop agri-tourism routes within the county. Those involved also wanted to build stronger relationships with their peers.

To help steer the project, a Direct Marketing Advisory Committee was formed and met periodically during the grant period. The committee, composed of agri-tourism business owners, members of the Broome County Farm Bureau, and members of the Broome County Chamber of Commerce, prioritized tasks for implementing the project.

The grant period extended from September 2003 to January 2005. Most of the elements described in the initial work plan were completed, although some after the official close-out date of the grant.

Training and Technical Assistance

The Extension offered 19 workshops between January 2004 and April 2005. Workshop topics covered various aspects of business development and management, direct marketing to consumers, and agri-tourism market development. One hundred forty-seven new or existing farmers attended one or more workshops, and total workshop attendance was 295. The workshops appeared to be well-received. Responses to evaluation forms distributed at some of the workshops were generally very positive.

Individualized technical assistance was provided to 139 new or existing farmers. This included help with analysis of their existing resources and the current direction of their businesses, and referrals to appropriate agencies for additional assistance with business planning.

Weekly sessions were also held for farmers in the Extension's computer lab. These included training in basic computer literacy and help using the Internet for product and market research. Approximately three to five farmers used the computer lab on a weekly basis.

The Extension also initiated its quarterly *Market Basket* newsletter that provides news and information to agri-businesses about marketing events, programs, and resources. The newsletter was still in publication as of mid-2008.

Formation of Purchasing and Marketing Groups

The Extension supported the development of a number of purchasing and marketing groups. This included:

- Establishment of a livestock producers group with the objective of bringing a USDA-certified slaughter facility to the area and jointly marketing value-added meat products. This work of this group led to receipt by the Extension of a grant from the New York State Department of Agriculture and Markets to conduct a feasibility study for the slaughterhouse.
- Initiation of efforts to establish a farmers' marketing association.
- Formation by the Susquehanna chapter of the Northeast Organic Farmers' Association of a purchasing group to study whether costs savings could be achieved

through cooperative purchasing of organic grains. The group determined that, in fact, no cost savings could be achieved.

- Formalization of the management and operations of three farmers markets.

Development of Agri-tourism and Direct-to-Consumer Marketing Tools

The Cooperative Extension worked with area farms, the Broome County Farm Bureau, and the Broome County Chamber of Commerce to develop an agri-tourism marketing brochure. The brochure included information on 36 local agri-businesses. With in-kind project funding from the Greater Binghamton Convention and Visitors Bureau (CVB), 20,000 brochures were initially distributed at various visitor tourism welcome centers and hotels in the area. The brochure was later redesigned, three businesses added, and an additional 20,000 distributed using ARC funds.

The Extension also worked with participating business owners, the New York State Department of Agriculture and Markets, and the Advisory Committee to create a logo identifying agricultural products grown in the Southern Tier. Research, however, indicated that there was an insufficient volume of direct-market agricultural products produced in the county to make a recognizable consumer brand. While not used for regional product branding, the logo was used for branding the *Market Basket* newsletter and on flyers and posters.

The Extension held discussions with motor coach tour operators about including agri-tourism stops on their tour itineraries, but did not have much success in this regard. It learned that physical improvements would likely have to be made at any stops to accommodate motor coaches and large groups.

Other market development activities completed by the Extension during the project included creating a website with the agri-tourism brochure, and helping to plan and execute marketing campaigns to promote the local farmers' markets through displays, brochures, and PowerPoint presentations.

Completion of Agri-tourism Development Plan

The Direct Marketing Advisory Committee completed a five-year agri-tourism development plan. The plan included recommendations for marketing and promotions, attraction development, and product diversification.

The Role of ARC Funding

The Extension's executive director and agricultural economic development specialist believe that the ARC funding was essential to completing the project work plan. It enabled the Extension to hire a part-time program assistant to provide additional staffing for the project. The agricultural economic development specialist, who directed the project, would not have been able to undertake many of the tasks included in the work plan given her existing workload. They also believe that the ARC-funded project laid the

groundwork for subsequent initiatives by demonstrating the potential for agri-tourism and direct-to-consumer marketing, and by enabling them to build relationships with business organizations and political leaders and leverage additional resources.

PROJECT OUTCOMES

Agri-tourism and agri-marketing efforts in Broome County have continued and have gained momentum since completion of the project.

Farm Friendly Broome County is one important initiative that emerged from the activities undertaken and relationships developed during the project. A collaboration of the Cooperative Extension, the Farm Bureau, U.S. Department of Agriculture, Broome County, and the Broome County Soil and Water Conservation District, Farm Friendly Broome County seeks to advance the visibility, sustainability, and profitability of all aspects of agriculture in the county. Its website, launched by the Extension in late 2007 with input from its partners, seeks to bring together in one place a range of information about agri-marketing and agri-tourism. The website includes information on developing an agricultural enterprise, agri-tourism, buying locally, and local events, as well as links to related sites. It provides a user-friendly tool to identify vendors of local agricultural products, sorted by product category.

In another new regional marketing effort, the Extension developed the Buy from the Backyard initiative, which encompasses Broome County and two neighboring counties. Buy from the Backyard's website, targeted to local consumers, has a buyer's guide that enables users to identify vendors of local agricultural products along with other information about buying and preparing these products. The initiative is also marketed through radio and TV advertising.

Marketing efforts initiated during the project remain in place, and some have been expanded. The Greater Binghamton Convention and Visitors Bureau, after funding the agri-tourism marketing brochure, has expanded its agri-tourism marketing efforts. The CVB now has a webpage on agri-tourism with individual businesses listed. It has also added an agri-tourism section to its *I Love New York Travel Guide*, which can be downloaded from its website and is distributed at local welcome centers and in response to information requests.

With the Extension's assistance, a new regional farmers' marketing association is in the final stages of development. The association will promote the development of farmers' markets and other marketing channels for agri-businesses throughout the southern tier of New York and northern tier of Pennsylvania, and assist agri-businesses that want to diversify and increase their sales in local markets. The Extension has committed funding for launching the new organization. Efforts are also continuing to develop a USDA-certified slaughterhouse in the region, which would facilitate more local sales of value-added meat products.

The Extension and the CVB have continued efforts to market agri-tourism to motor coach tours. The Extension is planning to add facilities to accommodate tours when it renovates its Cutler Botanic Garden, a current stop for a small number of tours. The Extension continues to conduct research on this market to determine other ways to attract additional business.

As local political officials and economic development professionals have become more aware of the economic benefits of agri-tourism and local purchasing of agricultural products, new efforts have emerged to more fully capture these benefits. In mid-2008, the county commissioned a feasibility study for an all-weather farmers' market that would operate year-round, or most of the year, and would include space for more vendors as well as complementary activities. The county also was planning to develop a shared-use commercial kitchen for new food product development and, possibly, full-scale production of some products.

In follow-up to the completion of the five-year agri-tourism development plan by the ARC project's Direct Marketing Advisory Committee, the county's Agricultural and Farmland Protection Board incorporated agri-tourism into the county-wide Agricultural and Farmland Protection Plan and identified it as among the highest priorities. In 2008, the Agricultural and Farmland Protection Board and the Cooperative Extension's Agricultural Profitability Committee completed an updated plan centered on creating more cohesive relationships with the county and tourism offices, updating skills and education around marketing and agri-tourism issues, and creating product mixes and packaging attractive to tourists.

While the project did not have any explicit social or environmental objectives, it did appear to generate positive outcomes with regard to these two elements of the "triple bottom line." In terms of environmental outcomes, farmers who are able to diversify their products, market more effectively, and increase their profitability are less likely to face pressure to sell their land for more intensive residential or commercial development. The county's Farmland Protection Board recognized this by making agri-tourism development a high priority in its Farmland Protection Plan. In addition, increased local sales of local farm products lessen transportation requirements, thus reducing carbon emissions. Small-scale, local production may also make less intensive use of agricultural chemicals.

The social dimensions of the project are less tangible but still present. The agricultural economy has tended to function in a separate sphere from other segments of the local economy, with its own set of relationships and organizational structures. The project and ensuing activities have brought the agricultural community together with other local economic stakeholders in collaborative efforts that have identified common interests and built relationships. The project has also built relationships, organizational structures, and leadership among non-traditional agricultural producers (e.g., through the marketing and production groups). This has increased their ability to work together to address common challenges and opportunities. Finally, the project has promoted interchanges between

farmers and urban consumers, helping consumers better understand the value of supporting local food production.

Looking to the future, there is a general consensus among agricultural, economic development, tourism, and political representatives that agri-tourism and local direct-to-consumer sales have strong growth potential and will contribute more to the local economy in years to come, particularly if the efforts that have been initiated in recent years are maintained and expanded.

MEASUREMENT ISSUES

There is considerable evidence that the project and ensuing activities have helped local agri-businesses to increase sales to visitors and local consumers. In a random sampling of business listed in the agri-tourism guide conducted in mid-2005 by the Cooperative Extension, half of the businesses attributed an increase in sales to the guide. Most others reported uncertainty because they had not tried to track the guide's impact on patronage. The growth in patronage of the farmers' markets is another general indicator. Finally, the level of engagement and enthusiasm among agri-businesses themselves indicates that they see the value of these activities in their bottom lines.

That being said, the Extension has only been able to estimate through observation the degree to which the economic impacts projected in the ARC funding proposal were achieved. It estimated 12 new agri-businesses formed as of mid-2008 compared to an initial goal of 25, and an increase of 15 agri-business jobs compared to an initial goal of 20. It also estimated that 30 percent of existing agri-businesses have expanded to include agri-tourism and/or an alternative enterprise compared to an initial goal of 50 percent. These figures may well increase as efforts progress. The Extension has not been able to document increases in direct sales from farmers to consumers. One reason is that farmers are reluctant to reveal sales data. Another is that mechanisms have not been established to obtain data on the sales impacts of specific marketing tools. For example, information is not systematically collected from consumers about how they learned about a business and why they buy its products. A third reason is that the Extension does not have the staff in place to conduct surveys or other forms of data collection on an ongoing basis. The Extension is exploring the development of practical methods to obtain sales data, but it is uncertain whether data collection barriers can ever be fully addressed.

Data collection issues aside, the Extension staff have concluded that it was unrealistic to expect the magnitude of impacts projected in the ARC funding proposal within the timeframe of the project. While they see evidence of progress, they note that the development of new agricultural products and markets is a process that takes place over a period of several years, not one or two. Therefore, even if effective data collection methods can be developed, the timeframe for assessing the economic impacts of this type of project must extend far beyond the end of the ARC grant period.

CERAMIC GUILD OF APPALACHIA

Appalachia is often characterized by its isolation. Communities lie separate from urban areas by difficult terrain and infrastructure too often neglected. But that physical isolation cannot prevent global economic changes from being felt in even the most remote parts of the Appalachian region. In the case of rural Ohio, global changes in the ceramics industry ultimately scuttled what had the potential to be an innovative program that sought to build social networks among ceramics companies and to begin to help them build a niche for their products.

PROJECT DESCRIPTION

ARC awarded Hocking Technical College in Nelsonville, Ohio a \$225,000 grant in 2003 to create the Ceramic Guild for Appalachian Ohio. The grant built upon an initial investment made by the Commission, which created a Ceramics museum that highlighted the history of the Ceramics industry in the region and showcased work by regional artists.

Southern Ohio had a long tradition of ceramics with the abundance of clay in the area making a natural for producing this product used both as decorative pottery and as industrial ceramics. Hocking College, as the leading educational institution in the area, has a vested interest in helping industry within its service area prosper.

The college approached ARC to fund the Guild with several goals in mind. First, it believed that it could bring together ceramic artists in the region with the larger ceramics companies. This would allow the companies to develop more creativity-based product lines and allow the region to develop a market niche. Second, the guild hoped to create educational programs that would present new techniques and technology around ceramics product that would allow businesses to more effectively compete. Third, the Guild, along with the Ceramics museum, would help “develop and promote the national heritage in ceramic art that has been perpetuated for over 100 years in the region.” This would happen through acquisition of more permanent pottery displays for the region and encourage more pottery shows that highlight local artists and companies. Fourth, the college and the guild would encourage entrepreneurship for potters in the area to ensure that the industry would continue to grow.

PROJECT IMPLEMENTATION

The first months of the project’s implementation forecasted great success for the effort. During the first fall, more than 75 students signed up to receive training in decorative course work. These skills were seen as the first step to making the potters more competitive nationally. As the program continued, project staff actively were engaged in recruiting new students for the training program, reaching out into local educational providers to show how the effort could help pave the way for advanced careers in ceramics. “I think the primary goal was the educational program,” said the program

manger during the final years of the program. “I visited local schools and I acted as a pottery recruiter,” instead of the army recruiter that one might expect to see on a campus.

The goals of the guild itself were to offer an alternative to companies who were facing increased competition. The purpose of the guild was to affiliate an artist group and cultivate it. Over the time it would provide art and design alternatives for these potteries. An artist who came up with a design could mass produce it.

Getting companies together in terms of the guild proved more difficult. Companies, who had been used to stealing employees and designs from each other, were understandably reluctant to get together to swap ideas about increasing their general competitiveness. And then the bottom fell out of the ceramics industry.

The reasons for the industry’s collapse are similar to the decline in other manufacturing sectors. Cheaper imported goods, primarily from China, caused users of ceramics to look elsewhere. In 2000, Muskingum County, where the museum was located, had seven establishments with a total of 297 employees. By 2007, there were only two establishments with a total of around 50 employees. The results were devastating—to the firms, to the employees, and ultimately to the project itself.

“There was a need for skilled technicians in pottery but then economy hit—they all went out of business,” said the owner of one of the few ceramics shops left standing.

With the shutdowns of participating and potentially participating firms, the guild lost momentum and ultimately ceased being operational. The museum’s training programs tailed off although the museum itself continues to be operational. It has a strong web presence and works to continue to promote the ceramics heritage of the region.

Hocking College, which sponsored the project, still sees great potential in assisting the ceramics industry. The project manager sees the college, with its tradition of advanced fine arts having the ability to 1)help local artists gain the business skills they need to get their products to market 2) to finish the work of getting the ceramics producers that remain the help in adding design to allow them to become more competitive.

PROJECT OUTCOMES AND MEASUREMENT ISSUES

As the above indicates, the outcomes of the project were ultimately very limited due to circumstances beyond the control of the project. At least this is the case in job creation and retention. The global forces at work in the case of the ceramics industry were too great and ultimately too unexpected to allow the guild strategy a chance to work. Other work on networking and on incorporating design into manufacturing suggests that it was not necessarily a misguided strategy rather that it needed to be implemented several years before. The chance to incorporate design into the ceramics products industry in a greater way is clearly the right approach—market forces simply overwhelmed the project.

Measurement of numbers of individuals trained appears to be a much more appropriate way to evaluate the project's direct impact. Project staff tracked numbers of individuals taking courses at the museum for which the ARC provided funding. As in the case of most of these projects, there is not follow-up done to see what if anything these individuals do with the training they receive. Instead, the program simply tracked whether or not they received training—follow up work has not been done to date.

The program did report an extremely positive experience in working with ARC around evaluation, a point that is worth emphasizing. After the project was closed, ARC staff visited on a validation visit. “More than the measurement activities, the validation visit was helpful to letting us know more about the impact of our work,” the director said. The validation visit helped the program director formulate new ideas on how to incorporate design into future college programs and how to meet the project's original goals.

HERITAGE TRAILS IN SOUTHEAST TENNESSEE AND NORTHWEST GEORGIA

In some communities, tourism efforts are not focused on just one locale with places, towns, counties and even states collaborating to create heritage trails. These trails allow motorists and other tourists who are interested in a particular subject area to travel to more than one location during their visit. In so, the tourist would extend their stay in a region and potentially produce more impact on a communities region.

This case study profiles two heritage trails funded through the Appalachian Regional Commission's Tourism Program: 1) The Religious Heritage Trail in Southeast Tennessee and the 2) Chickamauga Campaign Heritage Trail in Northwestern Georgia. Both of these trails are excellent examples of this type of tourism activities both in terms of their ability to attract visitors and in the difficulty in evaluating an activity with multiple visitors.

PROJECT DESCRIPTION

ARC awarded a \$40,000 grant to the Southeast Tennessee Development District in Chattanooga to create the religious trail, known as the Glory Land Road. The grants proceeds were to be used to develop signage for 20 sites in Southeast Tennessee and to create promotional materials, including a web site to encourage visitors to these sites. The Glory Land Road is the first trail in the US to seek to take advantage of tourist's interest in religious heritage. The Glory Land Road is ecumenical in nature featuring such diverse stops as small rural churches, a synagogue in Chattanooga, a holocaust memorial, a large Pentecostal university, and the site of the famous "Scopes Monkey" Trial that debated evolution.

The Chickamauga Campaign Heritage Trail documents a more standard historical event—the battle that many believe is one of the turning points of the Civil War. The \$50,000 grant from ARC awarded to the City of Chickamauga, Georgia includes support for signage, developing of a marketing plan and creation of a web site to promote the trail. The goal of the project was to position Chickamauga and surrounding communities as a viable tourist attraction to take advantage of the hundreds of thousands of tourists who visit the National Battlefield Park just outside the city and who might be encouraged to stay longer if they knew of more sites. The ultimate goal is to position the region as the "Gettysburg of the South."

PROJECT IMPLEMENTATION

Both of the projects have been implemented with both national and regional fanfare. The religious heritage project in particular garnered attention from such national publications as USA Today, CNN and ABC News, mainly focusing on the unusual nature of a heritage trail devoted to spiritual sites. In both cases, the implementation efforts required significant on-the-ground cooperation between the grantees and the sites participating in

the trail. In order to be included in the religious heritage trail, sites had to agree to contribute a certain amount towards the cost of the permanent marker placed on or near the locale. For some, coming up with the amount of funds—less than \$1,000—was not difficult. In other cases, such as in the case of the one small church, it was more challenging. For instance, this church is a very small historically African-American congregation. However, people in the community banded together to help put together funds for the marker.

In the case of the Chickamauga Campaign Heritage Trail, implementation has garnered attention as part of the regional run up to the sesquicentennial of the Civil War. Making sure that the region's sites are well equipped for the expected onslaught of visitors over the next few years is a goal shared by many in the region. Accordingly, the city of Chickamauga garnered support both financial and in implementation from the fifteen counties which the trail crosses. Each county contributed \$1,500 to the effort that assisted in the full-scale ramp up of the project from marketing materials to the signs themselves.

In both cases, the trails implementation was facilitated by the substantial collaboration across jurisdictional lines. In the case of Chickamauga's effort, working with counties across the region represented a new way of doing business. "It was the first time we had all worked together," said one county tourism director. "The effort was really the first time we had been all around the same table." The fact that not only did individuals come together to discuss the effort but make a financial contribution has been critical to the project getting off the ground.

PROJECT OUTCOMES AND MEASUREMENT ISSUES

More so than perhaps any type of tourism project, analyzing the direct outcomes from a heritage trail is extremely difficult. While one can look at increases in numbers of visitors at individual sites, it is difficult if not impossible to directly attribute that to the existence of the trails themselves. Visitor data was not directly gathered in either the Religious Heritage Trail or the Chickamauga Campaign Trail that would suggest a direct impact on visitation as a result of the trail. In many cases this would have been impossible, many of the sites were just signs on the side of a road making things like site-based surveys or visitor logs impossible. Tracking of the trail use was primarily done through distribution of brochures or through visits to web sites promoting the trails.

There is anecdotal evidence, however, that the trails have increased visitation. In the case of Chickamauga, those involved in the project report that the trail is encouraging visitors to spend more time in the region beyond just visiting the Battlefield. "We want people to spend time to potentially track the experience their ancestors had going through the campaign," one person said. "We want this to be a multi-day experience."

Since the trail was put in place a new hotel opened in Chickamauga catering to these multi-day visitors. In addition, a family owned Mexican restaurant is now opened in downtown Chickamauga. There is no absolute evidence that these establishments or just as importantly the jobs associated with them came directly from the implementation of the project. Those interviewed for the case study did believe that increased visitation and the resulting increase in visitor spending did indirectly result in increased employment in the region. Indeed, the original proposal suggested that the ARC investment would lead to the creation or retention of 100 jobs. While this figure may have been reached, any evidence towards this would be simply anecdotal as would the suggested \$30-40 million impact that the project was supposed to generate.

The Glory Land Road's impact is similarly hard to measure. The project had similar goals—"to keep people here for longer time instead of just a day." Impacts have tended to be seen in the number of brochures used. "We couldn't keep it on the shelf."

Determining actual visitation is very difficult. For instance, it would be difficult to measure how many individuals visited the Prayer Plaza one of the stops on the Trail. The Plaza is a public space on the campus of the International Church of God in Cleveland, Tennessee. There is no facility that can keep track of visitors to the site so it would be difficult if not impossible to gauge visitation in that area.

The Glory Land Road's Impact's therefore like Chickamauga almost exclusively anecdotal. One of the greatest outcomes is the energy that banding together to raise awareness about the unique sites in Southeast Tennessee brought forth. For example the community of Charleston, Tennessee became so interested in being represented on the trail that people became interested in forming a historical society and are working towards increasing historical preservation in that small community. "Charleston has a new attitude about history," said one program participant.

Another impact that may have come through the Glory Road is the emphasis on regionalism. Much like Chickamauga, the Religious Heritage Trail relied on many different communities coming together to create a joint planning effort. The fact that in Southeast Tennessee most of the counties worked through the Southeast Tennessee Development Association made the effort easier but the extension of partnerships built through the Trail can be seen as a critical outcome.

In terms of job creation, it is difficult to attribute any direct impact on employment on the region as a result of the Glory Road. Again increased visitation to the area can be assumed to increase tourism spending which could increase employment at hotels and restaurants and other establishments catering to visitors. Estimating what percentage of those jobs is attributable to the trail specifically was beyond the ability of the grantee.

TRIPLE BOTTOM LINE IMPACTS

The concept of heritage trails does bring into play some very interesting issues around the Triple Bottom Line. Certainly, anecdotal evidence suggests that the trails improved the economies of the regions that put the trails into place. However, as in the case of most tourism projects, the jobs that may have been created are in retail and are not generally that well paying.

In terms of the environmental impact, one could make the case that the trails encourage driving which could have an adverse impact on the environment in these regions. In many cases, however, these trails may be traversed by buses and may not actually encourage new trips to the region in automobiles but instead promote the idea of staycations where individuals in the region opt to stay closer to home rather than driving long distances to out-of-state locations.

The most positive impact in terms of the Triple Bottom Line appears to have been in increasing the idea of social capital among region residents. The increases in collaboration among organizations and individuals can be seen as a direct result of these two projects. In both cases, individuals were brought together who had not collaborated on other projects. In rural areas where there are issues of scale it is critical that communities are able to band resources together. In the case of the Glory Road Trail, social interaction also went down to the community level, with individuals raising money and thus awareness about projects that were near and dear to them, encouraging involvement and empowering them in the economic development of their community.

MOUNTAIN HERITAGE CRAFT INCUBATOR: BURNSVILLE, NORTH CAROLINA

ARC awarded \$200,000 to the Yancey County Cultural Resources Commission (CRC), a county agency, though the Regional Council of Governments in Boone to convert an historic high school boys dorm (“the old Brown Dorm”) in Burnsville that was originally built in 1914 into an incubator for arts, craft, a recording studio, wholesale and retail showroom/store for traditional mountain crafts, e-commerce web site for artisans. It was to become a centerpiece for Burnsville’s “Heritage Circle.”

The stated goal of the project, which was matched by \$223,500 in CDBG and state funds, was to generate at least 8 new or expanding businesses (resident craftsmen), stimulate or encourage at least 100 other local artisans, 30 increased sales, and leverage \$443,500 in private investment within one year after the facility was completed. The target was to be local traditional folk artists, not those associated with Penland. In fact, there was a clear intent to focus only within the borders of Yancey County.

CONTEXT

Yancey County, located in the western region of the state on the Tennessee border, is one of North Carolina’s poorest counties. Its population is less than 19,000, with about 1,800 living in Burnsville, the county seat. Once dependent on traditional manufacturing, most of the plants have shut down and now sit empty at both ends of Burnsville. The population is officially less than two percent non-white although that would be greater if it included undocumented Latinos. In 2000, before the manufacturing left, the poverty rate was 15.8 percent and 13.7 percent received food stamps, both well above state average for the state and for all rural counties. Only 13 percent of residents have a baccalaureate degree.

Although the county continues to pursue branch plants it also happens to be home to one of the highest concentrations of craftspeople in the U.S.—proclaimed to be the highest concentration by the Chamber of Commerce but without any hard evidence. The high concentration of artists is largely due to its Appalachian folk art heritage, its proximity to the world-renowned Penland School of Craft in the adjacent Mitchell County, and to the Celo Community, the largest intentional community in the state, which has a strong arts culture and has attracted a large number of artists from across the U.S.

Due to distance to Asheville (38 miles), Mount Mitchell and the Blue Ridge Parkway, there has been increasing development of new expensive new home developments along Highways 19E and 80 that are being purchased largely as summer homes for Florida residents. The most established is a gated mountain top community with its own airstrip and golf courses. Although not really integrated into the community, they do create a potential market for art, crafts, and handcrafted architectural elements. The current recession, however, is threatening some of the new developments

PROJECT IMPLEMENTATION

The building was completed and opened in October 2007 and is being used by a variety of artists. It sits in a hill overlooking the town across from the Parkway Playhouse, near a historic building they plan to turn into the new county library, and near a historic stone building now housing the school system offices. The long-term plan is to turn that area of town into a “cultural district” and initiate cultural events.

The project has quickly altered its initial direction, away from the original plan of incubating new businesses to become a low-cost shared artists’ and arts business space and resource center. The building shortened its name from the original “Mountain Heritage Crafts Incubator” to the “Mountain Heritage Center.” It expects Yancey County to eventually become a major tourist destination and that developing and marketing a “Yancey County” brand is the answer, with the Mountain Heritage Center a significant piece of it. But it intends to develop this completely independent of its surrounding assets, including Penland, which is less than miles outside the county border.

The facility has 12 small studios, an office for director¹, a conference room, artists’ lounge, small show room, an attractive front porch with potential for holding small events or coffees. Nine studios rent for \$100 per month, two slightly larger studios at \$125, and the recording studio at \$150. Limited parking is available on site but more nearby on the street. Although the building has no capability to house crafts that require kilns or ovens, there is one place in the basement that could possibly house a kiln. Yancey County pays the taxes, insurance, and director’s salary while the rental income covers utilities and upkeep. The Center has a strong 22-member Board of Directors that includes local officials, arts council, CC, local businesses. Its new chairman is a local developer.

At the time of the initial visits in January 2008, seven offices were rented by:

- a full-time photographer
- a part-time weaver who also manages an art gallery in town
- a part-time jeweler who expects to become full time
- the owner of a B&B who does art restoration on the side
- the high school principal learning caning as a retirement craft,
- the offices of the Parkway Playhouse
- a recording studio that moved there from a home-based studio in nearby Bakersville

Its most promising businesses were the photographer, who said sales had tripled since moving from her home to the studio, and the recording studio.

The facility also has meeting space used by the community plus a small gallery area. According to the Center director, in January 2008 initial goals were to:

- Rent all space but at higher rates

¹ Jeanne Ray, 682-9654 Jeanne@yanceycountyCRC.com

- Make the Center a community center and have at least one special event a month
- Develop a relationship with Mayland Community College and hold photography classes in the Center.
- Raise more financial support
- Establish a retail store for resident artists and others
- Develop stronger social atmosphere, including turning the front porch into a coffee shop
- Attract more tourists and customers

The CRC received at least one related grant, from the Golden Leaf Foundation to create a Tile Center in Burnsville where they would train and hire local people to learn how to manufacture ceramic artistic tiles. The tile were displayed and sold at the MHC. They hired and later fired a marketing director and the only full-time employees were the project directors, who also was the original Chairman of the MHC Board. The Tile Center project was abandoned in 2008 and the facility is still looking for new owners. The Center also developed a web site (Yanceyarts.com) on a Golden Leaf Foundation grant that was turned over to the CRC.

The real breakthrough for the MHC as a cultural resource for the County came in 2008 when the dedicated the recording studio at the Mountain Heritage Center to the County's best known musicians, Leslie Riddle. Riddle, an African American musician in an almost entirely white county, had played with the Carter family and Cashes and helped shape country music. On February 22, 2008, the ribbon cutting took place with a special concert featuring Leslie Riddle's friend, internationally known musician, and folklorist Mike Seeger. The Leslie Riddle Recording Studio was featured in an article in the January/February issue of *Blue Ridge Magazine*, citing the Mountain Heritage Center. A second "RiddleFest" highlighting his music and the recording studio is scheduled for February 21, 2009 at the town center, also featuring Mike Seeger.

But the local newspaper was still describing the Center as "a self sustaining business incubator" with "apprenticeship training, small business incubation and trade-show exhibitions"² although it was clearly becoming a cultural space and not an incubator.

By the summer of 2008 all but one space were rented, by

- a full-time photographer
- a part-time traditional voice group
- a three quarter time writer
- half-time by a teacher/artist
- an office for the area's Quilt Trail
- a full-time upholsterer and chair caner
- a part-time fine art restorer
- a mapmaker
- Parkway Playhouse office
- the Leslie Riddle Recording Studio

² Yancey County Time, July 21 2008.

OUTCOMES

The Center cannot be termed successful based on its original **economic goals** of developing and marketing local crafts. It has not incubated any business that has left the facility as a successful enterprise, and has not created any new jobs with the exception of the Center director. There is another very successful crafts incubator in the County called the EnergyXchange (built on a landfill and powered by its methane) that also has received ARC funds, but there is no connections between the two.

The Center is not operating a crafts gallery (although it does display art), and it has not been on the semi-annual open studio tour of the Toe River Arts Council, which includes artists and galleries. The county has a well-established art community and marketing structures, but the one dedicated folk art gallery closed about five years earlier (not for lack of business).

The project also has not raised the private sector match as proposed. Its connection to the Toe River Arts Council, located just blocks away, is weak.

The MTC is, however a success as a cultural and community resource and attraction and a success in terms of its unstated social goals. It has a dedicated director intent on making it a success. It has continuing support from the town council. And plans are progressing, albeit slowly, on developing the rest of the Heritage Circle.

The project also achieves its implicit **social goals** by serving the local community. Community organizations meet there regularly, Mayland Community College holds some continuing education classes in the Center in handbuilding with clay, video, video recording and editing. The visibility given to a native African American artist Leslie Riddle also helps overcome stereotypes and is a source of pride for the small African American population.

The only environmental outcomes are that the project restores a historic building and does not consume many physical resources.

BARRIERS TO GREATER IMPACT

The major barriers to long-term success are the unwillingness of the Board and city council to think or act regionally or collaboratively and largely artificially imposed (not recognized by craftspeople) distinctions between the “outsider” Penland-type artists and local folk artists. It based on a fear that non-local artists are negatively affecting local culture and believe that local crafts traditions have not been adequately valued because so many very good artisans have moved there from other regions.

The focus on Yancey County as a brand instead of the two-county area covered by the Toe River Arts Council that includes Penland School of Craft (which began as a way to develop local Appalachian crafts) restricts the market and arbitrarily bisects the cluster.

Another barrier to the Heritage Center becoming a major tourist destination is lack of accommodations and restaurants. The County does not allow sales of alcoholic beverages, making it difficult to support high-end restaurants, and there are no high quality local or chain motels. Residents are more apt to go to Asheville for entertainment and culture than others are to come to Yancey County. Arts Caravans from Asheville have been tried, but without success/

The community college, which could be an important partner, has not shown strong support for crafts.

MEASUREMENT ISSUES

Because the goals changed from the original proposal, no data are being collected and no one on the county is evaluating impacts or outcomes other than space rented and direct revenues generated.

CROOKED ROAD VIRGINIA PROJECTS

PROJECT DESCRIPTION

Within the ARC states Virginia has been most strategic in focusing on tourism, cultural heritage and natural asset-related projects. In particular the state has used the *Crooked Road: Southwest Virginia's Heritage Music Trail* initiative to build a portfolio of assets, programs and marketing tools to build the region. Much of the funding has gone to projects that built on the music-related cultural heritage of the region. These projects have led to additional efforts to build a more diverse tourism portfolio using trails, farmer's markets, artisan development and other tourist features.

Some of the projects that were used, directly or indirectly, to build the Crooked Road include:

| Project Title | Amount - ARC | Amount - Total |
|---|---------------------|-----------------------|
| Blue Ridge Music Trail | \$50,000 | \$107,000 |
| Ralph Stanley Museum & Visitor Center | \$500,000 | \$1,200,000 |
| Carter Family Memorial Music Center Expansion | \$500,000 | \$1,025,268 |
| Southwest VA Heritage Music Trail Network (3 projects) | \$109,000 | \$170,965 |
| VA Crooked Road Music Project | \$45,000 | \$93,000 |
| William King Regional Arts Center | \$17,500 | \$31,250 |
| BCMA Cultural Heritage Center Planning & Design | \$50,000 | \$259,374 |
| William King Regional Arts Center | \$50,000 | \$100,000 |
| Tourist Information Center & Southwest VA Farmers" Market Expansion | \$100,000 | \$200,000 |
| Blue Ridge Music Center Interpretive Exhibits | \$500,000 | \$1,585,000 |
| The Crooked Road VA Heritage Music Trail Executive Director | \$41,400 | \$76,667 |
| William King Regional Arts Center - Artisans Courtyard | \$310,000 | \$1,693,785 |
| Blue Ridge Music Heritage Tourism Marketing Campaign, VA | \$50,000 | \$100,000 |
| Heart of Appalachia Heritage Tourism Marketing Campaign, VA | \$50,000 | \$75,000 |
| Appalachian VA Artisan Network | \$100,000 | \$185,185 |
| | | |
| Total | \$2,472,900 | \$6,902,494 |

Not all of these projects explicitly targeted the Crooked Road but they served to build a tourism portfolio where the whole was greater than the sum of the parts. The ARC

investment for the projects listed here leveraged a larger amount than the funding that ARC provided. Most of the projects were Virginia ARC funded projects but the last three were Commission funded projects.

PROJECT IMPLEMENTATION

As can be seen above, much of the Crooked Road focus has been on building physical assets to present the musical and cultural heritage of southwest Virginia. These assets provide the infrastructure to present music and cultural heritage items such as the *Blue Ridge Music Center Interpretive Exhibits* or the *Birth of Country Music Cultural Heritage Center*. These are the bedrock of the strategy that provides a base for a broader range of tourism developments. We describe some of the individual projects below based on our discussions with project managers and stakeholders within the communities.

The *Virginia Artisan Network* “project evolved from the Crooked Road project that was started in 2001. This was a regional tourism base initiative that highlighted the music in the area and elevated natural resources. All towns located along the Crooked Road have become cultural and artistic centers. Virginia Governor Warner in 2002 mandated an arts and crafts initiative akin to the Crooked Road that came to be called *Round the Mountain: Southwest Virginia’s Artisan Network*. This initiative serves artisans and crafters in Virginia by bringing tourist into the region. The efforts work in unison.”

The project was designed and implemented to be more than an “end destination.” It was designed to send tourists to crafter’s shops and studios and to be not just a place where sales are made but something to give tourists the desire to explore. The artisan network was seen as an alternative to the declining economic base and to highlight the region’s assets. The network has grown to include more than 240 artists and has generated jobs and income to the region. It has led to a greater focus on the creative economy and generated conferences and other high profile events. It has also led to a series of networked retail sales outlets.

From a TBL standpoint the project is seen as bringing a stronger sense of community with more interaction with artists and citizens. It has also created mutually beneficial relationships that have led to more agri-tourism and a stronger local food system.

The *William King Regional Art Center Cultural Product Development* project was designed to create another marketing component to complement the Crooked Road initiative. It was begun as a way of preserving some of regional artisanal products by providing a market for artifacts made using traditional techniques. These traditional techniques were in danger of being lost. The project identified 25 unique crafts products.

The project manager feels the project has been a great success, with high quality goods that present what was a dying way of life. They hope to increase both local as well as online sales. The products include both those typically produced by men such as wood products and quilting products produced by women.

The *Birth of Country Music Cultural Heritage Center* was envisioned to document and build on the historical role of Bristol, Virginia and Tennessee on the development of country music in the early and middle decades of the 20th century. It was seen as an attraction that could build on the tourist influx from the Bristol Motor Speedway and broaden how people viewed the community. It has both tourism development and local community goals. With the construction of the Center, the Birth of Country Music Alliance and the local Chamber hope that visitors will see Bristol as a destination rather than a town near Bristol Motor Speedway. The interviewees also feel that the unique nature of this asset combined with the interest in country music nationally leaves Bristol poised to see impressive economic gains.

From a TBL standpoint the Center sees itself as providing a social connection between generations and a means to build community pride. The project manager noted that “We might serve as a destination and a starting point for a journey. The last exhibit we’re developing is about going down the Crooked Road. We have a moral obligation to let them know what the region offers. Our biggest challenge in this region is to get people here in the first place.”

He also noted, with regard to TBL impacts: “We want to show the interrelationships between the land, the culture and the people. Things like talking about the traditional instruments, wood from Gibson guitars for cabinetry. Those kind of relationships to the land, it is a part of our process. The building we’re in is a contributing structure to the historical district. We see a financial reward and doing the right thing at the same time.”

The *Crab Orchard Museum Expansion* partially funded by ARC was another project that was seen as symbiotic with the Crooked Road. The ARC funding was seen as critical as small museums like Crab Orchard have difficulty attracting foundation dollars. The project was designed to add features but also to increase other capabilities such as providing more office space and improving visitor services such as a gift shop. It is seen as increasing the numbers of tours, hosted functions (an asset for the local community) and improving the care of the artifacts. The improvements have led to more local income, more grants to artists and also increased donors improving long-term prospects. It has also led to 7,000 more annual visitors, added 9 jobs, increased overall impact on area's economy and expanded overall tourism related efforts.

From a TBL standpoint the project has “built new relationships and the project has boosted pride of people in the local community – they are very proud of the exhibit and they will bring family and guests” to the museum when they visit. “The Museum is improving the quality of life which is a key component to selling the area” and keeping residents and encouraging new residents to the area.

PROJECT OUTCOMES AND MEASUREMENT ISSUES

There are often un-measured spillover and synergy impacts from projects. This is particularly evident in the Crooked Road region of southwest Virginia where a series of related projects funded by ARC have helped create a creative cluster that builds on the

relationship between projects. The project discussions above provide a feel for the ways that the Crooked Road interacts with other economic development efforts within southwest Virginia.

To summarize we found that synergy elements included:

- Musical heritage brings tourists to region and employs musicians and other artists. Much of the impact comes from evening concerts that draw visitors and provides jobs and income.
- The Blue Ridge Parkway provides both a means for access as well as a tourist draw. Trips on the parkway are longer when there are additional activities off the parkway that lead to extended stays within the region. For example, the community in the town of Floyd has developed music, food and wine festivals at a venue right off the parkway that markets and brings tourists to the town.
- Agri-tourism provides additional options for activities during the day, for example the Abingdon farmer's market. In addition, the availability of local foods provides other cultural and environmental benefits for tourists who are drawn to restaurants that market the use of local foodstuffs including local wines.
- Development of artisan networks provides daytime shopping options, provides avenues for increasing artists' income and serves to preserve much of the artisanal heritage of the region.
- Hiking and biking trails including the Virginia Creeper trail provide outdoor recreational options and increase the length of visitor stays.
- The development of Crooked Road projects had positive impacts on the local community. For example the museums provide additional opportunities for education and bringing students to the facilities. Facility space is used for training programs for farmers and others.
- The projects have helped build a feeling of pride and connectedness to the community.

A recent study was completed of the Crooked Road *portfolio* of projects. Since ARC has provided funding for virtually all of the Crooked Road projects (mostly in tandem with other Federal, state, or local funds) it provides a test of the value of using a more strategic project funding that could be encouraged in other ARC states.

The 2008 study was conducted by Sustainable Development Consulting (SDC) and entitled *Economic Impact Assessment of the Crooked Road: Virginia's Heritage Music Trail*. The analysis was based on surveys and other data sources that estimated visitation, dollars spent, length of stay and other direct impacts. These data were then examined using an economic input-output model that tracks how economic impacts flow through a regional economy.

They estimated that the Crooked Road Music Trail generated \$22.8 million in annual revenue to the region and accounted for 445 full-time equivalent (FTE) jobs. How does this compare to the estimated impacts as reported by ARC grantees for the same portfolio of projects? The grantees reported that their projects generated 80 jobs or 18% of the estimated total reported by SDC. On the other hand the 445 FTE estimate is quite close

to the initial projections made by the ARC grantees of 416. The use of such a model is a needed tool to be able to fully document a strategic portfolio of projects where there is significant synergy between the various elements.

Clearly the Crooked Road Music Trail has, as designed, created a brand for southwest Virginia that can be used to market individual projects and assets as well as the overall region. This identity has had both internal impacts on how the region sees itself and on outside marketing of the full range of Crooked Road region activities.

We recommend that ARC look into ways to encourage states to become strategic in their investments. The consistent and planned method of investment through a strategically designed program provides a model for using projects to build a stronger regional economy, brick by brick and asset by asset.

Project by project measurement of impacts serves only to examine the direct impacts of the project within the project area. Examining projects in a vacuum can underestimate the impact of an individual project. When one project increases the likelihood of lengthening stays within a region it has a multiplying impact on other projects.

This is true not only for projects funded by ARC but for other developments outside of ARC's project range of efforts. For example, the burgeoning wine industry plays an additional role in attracting tourists, lengthening stays and increasing the viability of the local and regional food systems.

CREATING ASSET-BASED ECONOMIES IN WESTERN NORTH CAROLINA

PROJECT DESCRIPTION

ARC awarded \$200,000 to The Conservation Fund (TCF) to support economic development in Western North Carolina. To achieve this goal, TCF served as a fiduciary agent for a number of smaller grantees from Western North Carolina. This project is related to similar efforts that TCF is taking within other areas of North Carolina under their Creating New Economies Fund (CNEF). The project had an additional element that expanded an existing asset-based lending program. Within this case study we focus on the small grants program.

Unlike the other case studies within this report, this project was designed and conducted based explicitly on triple bottom line philosophies. All grantees were required to demonstrate a dedication to the triple bottom line from project application through execution. In addition to providing funding, TCF also provided technical support and training. Many of these grantees are small non-profits or agencies that would be unable to take the time to apply for and manage a full ARC grant. TCF describes the program:

“TCF’s Resourceful Communities Program (RCP) proposed to expand the Creating New Economies Fund (CNEF), providing small grants of up to \$15,000 to local agencies and/or nonprofit organizations for community-driven, asset-based development initiatives that generate economic, social and environmental (“triple bottom line”) returns-on-investment.”

PROJECT IMPLEMENTATION

The TBL small grants program has two features that implement a TBL approach.

The first is that it is intentional in nature; organizations must demonstrate that their proposed project integrates TBL as a basic operational goal. The process begins with the project’s mission and vision and then follows with goals, objectives, outputs and outcomes – and all reflect a commitment to TBL.

Second, the project requires and instills a collaborative, continual training and learning process that integrates evaluation. Grant applicants and recipients are required to attend workshops (the Fund pays basic travel and per diem expenses) in which they learn the basic elements of TBL as an explicitly integrated goal of action and go through a rigorous but straightforward group exercise that takes them through the steps of building an evaluation system.

The workshops stress that the organization must be intentional, participatory, and explicit about evaluation. The workshop also instills the idea that TBL evaluation is a valuable management tool that actually increases project impacts and organizational effectiveness.

One of the key parts of this program is that recipients are required (and funded) to return for workshops during the project funding cycle. The Fund staff report that these sessions become great methods to demonstrate what is working, what is problematic and how others have dealt with unforeseen issues. It becomes a collaborative learning process that builds and transfers expertise.

PROJECT OUTCOMES

Three of the grantees and their TBL impacts are profiled below.

Stecoah Valley Food Ventures

The Stecoah Valley Arts, Crafts and Educational Center, which hosts the Stecoah Valley Food Ventures project, is a refurbished school facility including a gymnasium and school building. Initial grants from various regional and state sources covered reconstruction of the facilities. The \$7,000 grant from TCF was intended to make the kitchen sustainable and “empower local growers and emerging food entrepreneurs across the four county area of far western North Carolina.”

Economic: Jobs created: servers, kitchen manager, and maintenance. Cultural Heritage Tourism, products created in kitchen for sale, Appalachian Dinners, use of space as meeting place, reception hall.

Social: Education of community on heritage cooking, reinvestment in community specific assets, gathering place

Environmental: As we educate people about agriculture, we encourage people to preserve natural heritage.

Growing Minds Growing Roots

Growing Minds, Growing Roots is part of the Appalachian Sustainable Agriculture Project and ties the schools in Henderson County, NC to area farms. Students engage in a number of activities both in school and at the farms to help them better understand food systems, introduce them to fresh food and teach them basic cooking and food preparation skills. Farms establish relationships with school cafeterias, which then use the farms as sources of produce. The initial grant funding from CNEF was used to organize and facilitate a community meeting about *Farm to School in Henderson County*. The major outcomes from this meeting included stakeholder identification and stakeholder collaboration.

Economic Outcomes: supplemental income for local farms.

Social Outcomes: Collaboration among community groups, introducing children to local farms, connecting the community. Tying schools to the community.

Environmental Outcomes: Sustaining local farms, community investing in natural environment, children appreciating use of natural resources

Smoky Mountain Native Plants Association

The funds were used to establish an economic incubator. SMNPA focuses on native plant preservation and economic development, primarily through the harvesting, processing and marketing of native ramps. Ramps are a pungent plant grown in Western North Carolina that require special harvesting and processing. By using the facilities at the Stecoah Valley Arts, Crafts and Educational Center, SMNPA has created a lucrative local business that cannot be outsourced.

Economic: 64 seasonal jobs, marketing and sales of ramp powder

Social: diverse group of people (age, race, length of residency)- supplemental income in a region with a very low median income, protected part of Cherokee heritage

Environmental: teaches sustainable harvesting techniques, processing techniques that waste very little of the ramp.

The program ultimately funded 37 projects, all of which included economic, social and environmental impact goals. A key impact finding is that the ARC funding generated leveraged funding of \$1.28 million from foundations, the private sector and other federal sources.

According to TCF staff the typical projects have the following types of impacts:

Economic:

- Development of entrepreneurial programs
- Focus on secondary incomes
- Focus on green technology businesses and workforce

Social:

- Target entrepreneurial programs on non-traditional populations such as immigrants and minorities
- Bringing minorities, woman, low income and hard-to-employ (e.g., welfare recipients) into the workforce
- Including non-traditional populations into community, business and workforce decision-making

Environmental:

- Bring entrepreneurial skills to green businesses
- Target economic projects that are respectful of the environment such as sustainable agriculture and community gardens
- Focus on projects that serve environmental health issues such as sewer and water, lead prevention, healthy eating and energy efficiency

They found that grantees had the most difficulty in identifying the environmental aspects of projects and developing the measurement tools for the environmental parameters. Economic and social aspects were more straightforward to identify and measure. This finding has implications for ARC if it adopts a TBL focus.

MEASUREMENT ISSUES

We spoke with the Fund staff to get a more nuanced view on how the process works. We asked whether it was difficult for the organizations to modify or push their proposed projects to mold them to the TBL framework. Unexpectedly the staff reported that not only were individuals able to quickly articulate TBL aspects and goals but that the give-and-take within the workshop process helped others to think about how their projects could impact their communities in economic, social and environmental ways they had not realized.

From the standpoint of ARC, a project of this type creates an additional layer through which impacts are measured and reported. None of the impacts are directly the result of TCF activities but of their grantees. ARC's traditional oversight role remains with TCF and not with the ultimate grantees. This has both advantages and disadvantages. TCF has a close relationship with grantees, provides technical assistance and provides methods for collaboration between the grantees. It would be difficult for ARC staff to work directly with nearly 40 small grantees so the "out-sourcing" of administration and technical assistance appears to be an effective tool for ARC to make small grants to emerging organizations. Nevertheless, ARC must rely on TCF to accurately collect and report the impacts of the various organizations.

In addition, the TCF project has provided ARC with a low cost "pilot program" for a broader adoption of TBL with ARC.



Appendix F. The Triple Bottom Line: Overview and Application to Tourism

The Triple Bottom Line: Overview and Application to Tourism

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Introduction

Over the past few years, there has been growing interest in the need for organizations to be more sensitive to their corporate impact vis-à-vis the sustainability of environmental and human capital. The Brundtland Commission report (World Commission on Environment and Development, 1987) described sustainable development as being that which “meets the needs of the present without compromising the needs of future generations.” While there is no single agreed upon definition of the term “sustainable business,” for purposes of this paper a sustainable business is one that operates in an environmentally responsible way such that its products, services and business processes produce minimal negative environmental impact.

Building on the concept of sustainability, a new corporate philosophy and accounting form has emerged that takes into consideration not only the traditional economic “bottom line,” but also considers less quantifiable indicators that measure social and environmental impact. This new approach to measuring corporate performance is called the Triple Bottom Line (TBL) (Elkington, 1998). However, some organizations have presented themselves as being socially responsible through the use of various marketing and public relations techniques, but are, in reality, not necessarily “sustainable.” This half-hearted approach to corporate social responsibility has led to the emergence of proponents and opponents of TBL.

The purpose of this paper is to assess the usefulness of TBL as a tool to evaluate the sustainability of *tourism* projects. First, the idea of sustainability and sustainable development are presented. Next, the underlying concepts of TBL – both as a philosophy and as an accounting measure are presented with an examination of the pros and cons of TBL. Then, an overview of the emerging measures associated with the three dimensions of TBL: the economic dimension, the social dimension and the environmental is presented. Finally, TBL is integrated into the concept of “sustainable tourism” and a case is presented for TBL’s usefulness in evaluating the success and sustainability of tourism projects. The paper begins with a discussion of sustainability.

Sustainability and Sustainable Development

The concept of the triple bottom line originated from the notion of sustainability and sustainable development. Ecologically sustainable development (ESD) thinking was first espoused in the Brundtland Report (World Commission on Environment and Development, 1987) and reiterated during Agenda 21 and the Rio Declaration on Environment and Development (1992).

The Brundtland Report defined development as sustainable if it meets “...the needs and aspirations of the present without compromising the ability to meet those of the future (*The concept of sustainable development*, paragraph 1). Manning and Dougherty (1995) further clarified the term defining sustainable development as “the use of natural resources to support economic activity without compromising the environment’s carrying capacity, which is its ability to continue producing those economic goods and services (p. 30).”

One explanation for the increased attention to sustainability by organizations is provided by normative institutional theory. Normative institutional theory is a sociological perspective of organizational behavior which suggests that the “logic of appropriateness” guides the behavior of organizations. This “logic of appropriateness” means that organizations will react to environmental changes (such as community dissatisfaction or adversity) by initiating reforms (i.e., changing behaviors) and welcoming greater complexity (such as initiating more rules of conduct). In this way, the organization appears to be taking “appropriate actions” and as the marketplace becomes aware of these actions, benefits accrue to the organization (such as increased market share) as suggested by Kimmet & Boyd (2004).

In their review, Marshall and Toffel (2005) concluded that sustainability has been defined in many ways over the years. Based on that review, they see sustainability as falling along a continuum. At one end of this continuum (micro-sustainability), sustainability can be thought of as a business approach that creates long-term shareholder value by embracing opportunities and managing risks deriving from economic, environmental and social developments. The other end of the continuum (macro-sustainability), positions sustainability as a diverse set of societal goals such as poverty elimination and fair and transparent governance. Based on this rationale and Maslow’s Hierarchy of Needs, a sustainability hierarchy was developed. Like Maslow’s Hierarchy of Needs, the sustainability hierarchy levels build upon one another from the most pressing to the least pressing. The resulting four-level sustainability hierarchy includes sustainability of human survival (level 1 – the sustainability floor), sustainability of basic human health (level 2), sustainability of fundamental human rights and species survival (level 3) and sustainability of quality of life (level 4). The point of defining sustainability as a hierarchy was to show that virtually all organizational activities can be thought of as being sustainable (i.e., at least conforming to level 1), so it is important to identify the level of sustainability one is referring to when setting sustainability objectives. Their conclusion was that sustainability referred to:

“...transforming our ways of living to maximize the chances that environmental and social conditions will indefinitely support human security, well-being, and health.”

Accordingly, the degree to which an organizational endeavor is sustainable depends on a number of factors such as local environmental conditions, the local culture, the sustainability hierarchy level, and the spatial and temporal scale of the endeavor. The triple bottom line is one framework that organizations can implement to assess the degree to which their operations are sustainable.

The Concept of the Triple Bottom Line

Triple Bottom Line (TBL) is a term used to describe the *economic, social and environmental* accountability of a firm. TBL is directly tied to the concepts and goals of sustainable development and is a relatively new measure of corporate performance that requires the public disclosure of social, economic and environmental indicators of organizational performance and is a concept that is closely related to “social responsibility.” A key element of TBL requires that corporate performance should be geared not only to benefit its “shareholders” but all of its

“stakeholders” including groups such as the local community within which business operations are conducted.

TBL Defined. The term “Triple Bottom Line” evolved in the mid 1990’s when the consulting group AccountAbility coined the term which was later popularized by John Elkington (1998) in his book *Cannibals With Forks: The Triple Bottom Line of 21st Century Business*. The triple bottom line is a concept that expands the notion of organizational performance evaluation to include not only the traditional financial bottom line to one that also includes environmental quality and social justice (Elkington, 1999). Marshall and Toffel (2005) contend that the elements of the triple bottom line can be combined in pairs resulting in some of the popular terms used to describe sustainable projects. For example, *eco-efficiency* involves optimizing economic and environmental goals, *fair trade* is concerned with conducting economic activity with attention to social consequences, and *environmental justice* involves achieving social equity while respecting environmental protection.

It is important to note that TBL was intended to be a way of thinking about corporate social responsibility, not just an accounting methodology. Elkington (1994, 1998) stressed the integration of philosophy and accounting measures in implementing TBL and suggested that there are seven environmental drivers that have emerged to support its use (Table 1).

| Table 2 Environmental Drivers of the Triple Bottom Line | |
|--|--|
| Drivers | Characteristics |
| Markets | Unlike the past when business used competition as an excuse not to incur additional costs (for environmental and socially responsible behavior), future business will use TBL thinking to build a case for action and investment in environmental and social infrastructure. |
| Values | Society’s changing values towards more environmental and social consciousness will influence corporate culture. |
| Transparency | Organizations are facing growing international transparency about their environmental and social policies which is being facilitated by new societal value systems and radically different information technologies. |
| Life-Cycle Technology | There is a new emphasis on cradle-grave performance of products that examines product performance from extraction of raw materials through recycling or disposal. |
| Partners | New forms of partnerships are evolving among business organizations and campaigning groups (e.g., Greenpeace). |
| Time | Organizations are realizing that they must pay attention to long term rather than short term performance. |
| Corporate Governance | Top level organizational managers will be forced to pay attention to new issues such as the design of corporations and boards and their value chains of ‘business ecosystems.’ |
| (adapted from Elkington, J. (2004) “Enter the Triple Bottom Line”) | |

As Table 1 suggests, first-rate TBL uses relevant, common indicators to make it easier to compare performance or “value added” across organizations and requires honest, open and transparent disclosure. Ideally, it has been suggested that TBL should lead to improvements in

corporate performance. TBL reports should include key goals for improving organizational performance into the future – preferably quantitative and time-bound goals. The Global Reporting Initiative, a program developed under the auspices of nearly 20 agencies including the World Business Council for Sustainable Development, the United National Environment Program and the World Resources Institute, standardizes TBL measures and areas to be reported and currently has more than 1,300 participating organizations. The GRI suggests five categories of TBL indicators (GRI 2008). These include:

1. Economic performance
2. Environmental performance
3. Social performance
4. Labor practices and “decent” work
5. Public policies and implementation measures

The GRI also provides a reporting framework of how and what to report and measure (Figure 1).



Figure 1 – Global Resource Initiative G3 Reporting Framework

From an historical perspective, Elkington identified three “pressure waves” that led to the need for corporate sustainability and subsequently to the development of TBL (see Table 2).

| |
|---|
| <p>Table 2 Historical Pressure Waves Leading to the Development of TBL (Source: Elkington 2001)</p> |
|---|

| Wave | Time | Characteristics |
|---------------|------------|--|
| LIMITS | Early 60's | Environmental impacts and natural resources demands have to be limited – environmental protection |
| GREEN | 1988 | New kinds of production technologies and products are needed and have to be sustainable |
| GLOBALIZATION | 1999 | Growing recognition that sustainable development requires profound change in corporate governance and globalization increasing focus on government and on “civil society”. |

Elkington proposed that these and one or two more pressure waves will result in a “Chrysalis Economy” whose key driver will be the “unsustainability of current patterns of wealth creation and distribution.” These unsustainable patterns of wealth creation generate worsening environmental and social problems which themselves motivate society to transition to sustainable development and will require environmental policies for different types of organizations.

In addition, new government policies and new government roles will be needed to change existing organizations into more flexible and fluid entities that will support sustainability. This will result in major “silo-busting” campaigns [where silos are systems (i.e., industries) that cannot integrate with other systems (e.g., society)] and will require a comprehensive approach that involves a wide range of stakeholders across many areas of government policy. Developing this comprehensive approach will be a “central governance challenge – and even more critically, a market challenge” (Elkington, 2001).

Although TBL was intended to be a philosophy – a way of doing business that is socially and environmentally responsible – many organizations have adopted TBL as an accounting method or a slick public relations campaign and have overlooked the need to establish and follow a corporate philosophy in keeping with its intentions. However, when TBL is embraced to its fullest extent, it forces organizations to engage with their full complement of external stakeholders (e.g., customers, vendors, non-profit activists) to discuss particularly “thorny issues and seek advice,” (Dahle, 2007).

One caveat to the aforementioned discussion, however, is that the philosophy of TLB is not well understood and needs to be better explicated through the media. For example, Vandenburg (2002) found a great deal of confusion in the organizations they surveyed on the topic of TBL. In their empirical study of 32 organizations in Australia, they found many different interpretations and understanding of the TBL definition and philosophy. Therefore, it is necessary to understand the multidimensional nature of the triple bottom line to fully appreciate the scope of its coverage. This section begins by defining and discussing its three dimensions.

The Economic Dimension of TBL

Perhaps the easiest dimension to capture during triple bottom line evaluation is the economic dimension. The economic dimension can be assessed using traditional financial performance indicators such as sales revenue, profit, return on investment or shareholder value models. Other industry-specific measures are also readily available to assess the economic performance of an

operation. For example, in the tourism industry, indicators such as heads in beds (for hotels) or visitation (for attractions) are popular measures. More difficult to assess are the social and environmental dimensions of the triple bottom line. These dimensions are discussed next.

The Social Dimension of TBL

It has been suggested that the social dimension of TBL, sometimes referred to as *social capital* consists of two components: human capital (employees, contractors, suppliers and advisors) and investment by the social systems that support the business (Dwyer, 2005; Sauvante, 2001). A leading authority on social capital, Robert Putnam (1993) describes social capital as the “trust, norms and networks needed to facilitate cooperation.” Others such as Bullen and Onyx (1998) and Cox (1998) suggest that social capital is “created from a myriad of everyday interactions between people” and identify key dimensions such as valuing self and others; trust (interpersonal and generic); connection (community participation and social networks); multiple relationships; and reciprocity in relationships. Some social indicators suggested by the GRI include: employee retention rates; job satisfaction levels and investment per employee in illness and injury prevention (Goldsworthy, 2000).

Miller, Buys and Summerville (2007) developed a framework and indicators to assess the social dimension of the TBL for the Australian dairy industry. In their view, the social dimension involves social well-being, working with employees, their families, the local community, and society to improve their quality of life. Organizations with social awareness better understand and account for the consequences of their operations on the social well-being of the communities affected by those operations. Their framework specifies four dimensions of an operation’s social impact, including an individual’s well-being, community well-being, employment experiences and satisfaction, and organizational impact.

The Environmental Dimension of TBL

The environmental dimension is referred to by some as *natural capital*. For example, Onyx and Bullen (2000) and Schnake (1991) suggest that the availability of natural resources such as forests, minerals, fish and soil have long been taken for granted despite the fact that this is the “capital” upon which our existence depends (i.e., clean air and water). As Onyx (2000) so succinctly put it “wealth that destroys the basis of life is no wealth at all.” Environmental indicators suggested by the GRI include items such as total energy use, use of recycled materials and water sources significantly affected by an organization’s use of water.

Critique of TBL

TBL is regarded by some as a “useful tool for integrating sustainability into the business agenda” (McDonough and Braungart, 2002, p. 251). However, it focuses principally on controlling for the bad effects and not necessarily enhancing the positive effects of products. McDonough and Braungart (2002) proposed a focus on the triple TOP line where the emphasis is on increasing the good effects and thus, by definition, eliminating the bad.

On the other hand, others are skeptical about the virtues of TBL. For example, Vanclay (2004) criticized TBL proponents and through that they had much to learn from the social impact assessment proponents. He pointed out that while the economic and environmental indicators of TBL are easy to identify, the social indicators are difficult to assess.

Norman and MacDonald (2003) also criticized TBL. Their criticisms can be divided into those that (1) center on whether there are indeed additional bottom lines that can be measured as assessed (i.e., beyond the economic bottom line) and if they can, (2) whether organizations should measure and report those additional bottom lines.

For brevity's sake, Norman and MacDonald (2003) discussed their criticisms with respect to the social dimension, although they claim that the same arguments can be made for the environmental dimension. Regarding whether or not additional bottom lines can be measured and assessed (point 1) they invoke their "measurement claim" and their "aggregation claim."

The argument was that neither the social nor the environmental bottom lines can be measured in objective ways (as can the economic bottom line) (i.e., the measurement claim) and therefore, it is not possible to compute something similar to a social or environmental net profit (i.e., the aggregation claim). In essence then, there is no common currency to allow for the expression of good and bad magnitudes with respect to the social and environmental bottom lines.

Their second argument addresses the issue of why an organization should measure, assess and report its additional bottom lines (point 2). Here they raise their "convergence claim" (i.e., that measuring and improving social and environmental performance tends to be more profitable in the long run), their "strong social-obligation claim" (i.e., that firms have an obligation to maximize their social and environmental lines) and their "transparency claims" (i.e., that organizations have an obligation to stakeholders to disclose information about their performance on their social and environmental bottom lines. Essentially, their argument is that these issues are nothing new (they are corporate social responsibility) and have been incorporated into organizational strategic plans for years; however, maintaining the financial bottom line (e.g., shareholder value) is the only thing that really counts.

In addition to the aforementioned criticisms, Norman and MacDonald (2003) suggest that on both a conceptual and practical level the language of TBL promises more than it can ever deliver. For example, organizations may believe that by committing themselves to the principle of TBL, they are making a verifiable commitment to sustainability. However, TBL reporting gives an organization an opportunity to display only their clean laundry in public. On the flip side, it also allows firms not to provide data that could cause public embarrassment.

On the other hand, Pava (2007) responded to the criticisms of Norman and MacDonald (2003) by arguing that their "aggregation claim" was false. In essence, Pava (2007) suggested organizations that support the use of triple bottom line metrics do not have to assess their social and environmental bottom lines the same way that their financial or economic bottom lines are assessed. In addition, Pava (2007) pointed out that even the popular net income aggregate measure of financial performance was deemed a deficient indicator of financial performance since return on investment drew on more sources of information (i.e., the income statement and

the balance sheet). Since financial performance cannot be summarized with a single objective number, one should not expect to assess social and environmental performance in this manner. Finally, Pava (2007) reminded the reader that organizational performance is multidimensional.

To summarize, some suggest that TBL is nothing new. However, TBL thinking may produce some useful and dependable indicators of societal and environmental indicators of “value added” in relation to corporate responsibility and accountability. Furthermore, an organization’s motivation to use TBL might also include its attempt to differentiate itself from its competition to attract investors and customers who might be willing to pay more to support ethical firms.

Clearly, the main challenge associated with TBL is measurement. The social and environmental measurement and comparability of organizations and industrial sectors over time is proving to be a very difficult task. As Norman and MacDonald (2003) point out, it is commonly understood that in modern management theory; “*if you can’t measure it, you can’t manage it.*” Current TBL measurement efforts are time-consuming, vague, badly misleading (i.e., public relations rhetoric) and provide a smokescreen for poor performance. This raises the issue of industrial sector variables. This is one of the components of “what to report” discussed in the Global Resource Initiative G3 Reporting Framework. It suggests there are unique sets of sustainability issues faced by different industrial sectors such as the automotive, banking and tourism sectors, among others. For these reasons, to use TBL to evaluate sustainable tourism projects, it is necessary to explore TBL in the particular context of sustainable tourism and the corresponding variables of interest. The next section ties together TBL with sustainable tourism.

Linking TBL, Sustainability and Sustainable Tourism

The concepts of TBL, sustainability, sustainable development and sustainable tourism are closely linked. As Manning and Dougherty (1995) suggest, sustainable tourism is the best way to preserve the “*golden goose*” of tourism. They feel it is a viable tool to maintain and enhance a destination’s competitiveness.

Similar to other types of industries, Isaksson and Garvare (2003) identified sustainable tourism and development as that which finds a balance between economic prosperity, environmental protection and social equity. While there is still some debate surrounding a clear definition of sustainable tourism, there is wide agreement that it should facilitate the social, economic and environmental well-being of a region (Gilmore and Simmons, 2007).

Sustainable Tourism Defined. For the purpose of this paper, sustainable tourism refers to a level of tourism activity that can be maintained over the long term because it results in a net benefit for the social, economic, natural and cultural environments of the area in which it takes place.

For now, the term sustainable tourism (encouraged by both the WTO & UN) is used as an umbrella concept, under which terms, such as eco-tourism, heritage and cultural tourism, geo-tourism, may fall. These categories are discussed next.

Ecotourism. In a review of the literature, Hvenegaard (1994) identified ecotourism as “responsible travel to natural areas which conserves the environment and improves the welfare

of local people (p. 25).” Sometimes referred to as ‘nature tourism,’ ecotourism is nature-based tourism designed to minimize ecological impact to a tourism area and includes amenities such as landscape sightseeing, bicycling, hiking, canoeing, etc. (Mehmetoglu, 2007).

Heritage/Cultural Tourism. Various definitions have been offered for heritage/cultural tourism. For example, Caton and Santos (2007) see heritage tourism as tourism that engages with the cultural tradition of a particular location. Included in heritage and cultural tourism are tangible remains of the past such as artifacts, as well as intangible cultural assets such as folk traditions. Others have identified cultural tourism as historical and heritage sites, arts and craft fairs and festivals, museums, and the performing and visual arts which tourists visit in pursuit of their cultural experiences (Hall and Zeppel, 1990). Kerstetter, Confer and Bricker (1998) identified heritage tourism as being about the cultural traditions, places and values that groups around the world are proud to preserve. Included are such traditions as family patterns, religious practices, folklore traditions, arts and crafts, ethno-history, and social customs. Heritage/cultural tourism provides visitors the opportunity to understand and appreciate the character of an area and includes its history, archeology, people and their lifestyle, cultural diversity, arts and architecture, and social and political structure.

Agritourism. Finally, adopting a definition from Weaver and Fennell (1997), McGhee (2007), and McGhee and Kim (2004) identified agritourism as rural enterprises that incorporate both a working farm and commercial tourism component. Agritourism is based on attracting visitors to farm operations including crop and animal farms, U-pick operations, wineries, for-fee fishing operations, Christmas tree farms, herb farms and greenhouses, maple syrup and cheese producers, and farm stands.

In discussing sustainable tourism, Lansing and De Vries (2006) seem to be in the same “TBL critical camp” as Norman and MacDonald (2003) and further suggest that sustainable tourism is only a marketing tool to attract morally conscious tourists. Despite the apparent evidence for the positive effects of sustainable tourism, they also argue that the concept is vaguely defined, misused and lacks real content, thus reducing it to nothing more than a clever marketing ploy. Milne, Ball and Gray (20) also suggest that many organizations seem to confuse narrow and often incomplete reporting practices with claims of moving towards sustainability. They suggest the current TBL practice leads to a dangerous confusion and a “*change-but-no-change policy.*”

They also point out the need for more clarity to make sustainable tourism a practical reality as well as the need for a governance instrument (like a rating system). This might include a private sector approach to integrate sustainability governance with existing ratings such as AAA Diamonds, Mobile Stars and Michelin Stars.

According to the National Geographic Center for Sustainable Destinations (National Geographic, 2008), sustainable and geo-tourism (do no harm policies and practices) seek to avoid the “loved to death” syndrome and develop wise destination stewardship. In principle, business, government and other stakeholders can anticipate development pressures and apply limits and management that sustain natural resources, cultural/heritage resources, and balanced quality of life issues for local residents.

The sustainable tourism movement seems to be growing around the world. Several high profile international organizations are now developing policy, management principles, certification guidelines, etc. for sustainable tourism development. These include the U.N. World Tourism Organization (UNWTO), UNESCO World Heritage Center, The World Bank, World Travel & Tourism Council (WTTC), Pacific Asia Travel Association (PATA), and the European Network for Sustainable Development (ECOTIP), and many others. Furthermore, the governments of many countries have developed strong policies to encourage sustainable tourism including Australia, New Zealand, England, Costa Rica, Brazil, Norway, Peru, Romania, Canada and the Caribbean Alliance for Sustainable Tourism (CAST). In the United States, supported efforts through the National Park Service and the National Heritage Area Programs have emerged.

Other U.S. based non-profits like the Nature Conservancy, the National Trust for Historic Preservation, and the National Geographic Conservation Trust have supported and promoted research, conferences, and news related to sustainable tourism efforts. In the private sector, efforts or organizations include “Green Seal” with support from the American Hotel & Lodging Association and the “Green” Hotels Association. American Express Company has also been a leader and provided financial support of sustainable projects around the U.S. Hawaii, Vermont, Wisconsin, Rhode Island and Arizona are among the states leading the way in sustainable tourism (Sheldon, Knox and Lowry, 2005).

McCool, Moisey and Nickerson (2001) reported that from a list of 20 predetermined items that focused on what Montana’s tourism industry should sustain, the items ranked highest were “Montana’s natural and cultural heritage, community economic stability, quality of life and unique natural environment (p. 127).” Further, they point out the need for shared definitions to prevent the negative aspects of social discourse. They also suggest there is “somewhat of a disconnect between preferences for what should be sustained by tourism and indicators that might measure progress toward this goal,” (p. 127). Clearly there seems to be a monitoring dilemma that currently plagues sustainable tourism development. This dilemma indicates a need for developing useful measures for sustainable tourism as discussed in the next section.

Developing Measures of TBL for Sustainable Tourism

As stated earlier, one of the most challenging aspects of implementing TBL is the difficulty associated with developing meaningful economic, social and environmental indicators. Of these, the greatest challenge is associated with attempting to quantify social and environmental impacts. McCool, Moisey and Nickerson (2001) suggest that, in assessing sustainable tourism impact, the initial question when considering appropriate indicators must be “what should the tourism and recreation industry sustain?” followed by a need to identify indicators that can be monitored to determine if current policies are facilitating sustainability taking into consideration the context in which they exist. In developing appropriate indicators, it has been generally recognized that there is a need to tailor these indicators for specific industry sectors. Within tourism, it is also important to tailor indicators since tourists in different market segments can generate varying social and environmental impacts on destinations (Dwyer and Forsyth, 2008). A review of the existing literature reveals some early attempts to identify meaningful measures of sustainable tourism impact (WTO, 1996; Dymond, 1997). More recent progress using various approaches (such as the Delphi technique, surveys, interviews and focus groups) to develop

indicators of the economic, environmental and social impact of sustainable tourism based on data collected from a wide variety of constituent groups is discussed next and the results are compared and contrasted.

Economic Indicators. Economic measures of tourism are the most straightforward to establish and have long been in place. Typically, economic impact is measured by hotel occupancy rates, number of nonresident visitors, per capita tourist expenditures and lodging revenues, number of tourism employees and labor income from tourism (McCool, Moisey and Nickerson, 2001). Others have developed indicators focused on employment issues, destination economic benefits (Miller, 2001; WTO, 2004; Choi and Sirikaya, 2006), seasonality and poverty alleviation (WTO, 2004; Choi and Sirikaya, 2006). A comparison of the economic indicators that emerged from previous research is shown in Table 3.

| Theme | Indicators | Study | | | |
|-------------------------------|---|-------------------------------------|---------------|----------------------------------|--------------------------|
| | | McCool, Moisey and Nickerson (2001) | Miller (2001) | WorldTourism Organization (2004) | Choi and Sirikaya (2006) |
| Seasonality | Degree of seasonality | | X | X | X |
| | Strengthening Shoulder Seasons and Low Seasons | | | X | |
| | Provision of sufficient infrastructure year-round | | | X | |
| | Short-term and seasonal employment | | | X | |
| Employment | Number and quality of employment in tourism sector | X | X | X | X |
| | Professional and personal development | | | X | |
| | Contentment from work | | | X | |
| | Lack of skilled labor | | | X | |
| | Labor income | X | | | |
| Destination Economic Benefits | Business investment in tourism | | | X | |
| | Tourism revenue | X | X | X | X |
| | Community Expenditures | | X | X | X |
| | Net Economic Benefits | | X | X | X |
| | Changes in cost of living | | | X | |
| | financial rate of return to operators | | | | |
| | gross operating surplus of different tourism industry sectors | | X | | X |
| | hotel occupancy rates | X | | | |

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|---------------------|---|---|---|---|---|
| | number of nonresident visitors | X | | | |
| | Amount of money leaving tourism locality | | X | | X |
| Poverty Alleviation | Stabilizing and improving community income | | | X | X |
| | Improving local employment opportunities | | | X | X |
| | Operation and support of MSMEs | | | X | X |
| | Achieving equitable distribution of tourism funds/benefits across the community | | | X | X |
| | Number and type of development programs in place | | | X | |
| | Community survey assessment of usefulness and success of various development programs | | | X | |
| | Evaluating less tangible, non-economic, livelihood priorities | | | X | |

Social Indicators. As discussed previously, social impact is a term that is closely linked with the concept of social capital, i.e., improving trust, encouraging cooperation and collaboration, recognizing and enhancing individual and organizational networks and fostering life-long learning (Rogers, 2003).

To date, research has suggested a number of social impacts of tourism on communities. These include state of the local economy (Gursoy, Jurowski & Uysal, 2002), maturity of the tourism destination and level of community attachment (Fedline, 2001). More recently, in cooperation with the Sustainable Tourism Cooperative Research Centre (STCRC) and based on the Green Globe 21 Standard, Deery, Jago and Fredline (2005), developed a potential list of indicators to measure the social and socio-economic impacts of tourism on communities. Through the use of focus groups and in-depth interviews with community residents of a tourist community in Victoria, Australia, they identified a number of social and socio-economic indicators. Other suggested social indicators fall into broad categories of support for access and equity, pressure on services, pride and sense of belonging to local area, support for cultural and artistic endeavors, regional showcase and community health and safety issues (WTO, 2004; Choi and Sirikaya, 2006). A detailed comparison of the social indicators that have emerged from previous literature is shown in Table 4.

Table 4

| Review of Social Indicators of Tourism Impact | | | | | | | |
|---|---|-------------------------------------|---------------|-----------------------------------|---------------------------------|--------------------------|---|
| Theme | Indicators | Study | | | | | |
| | | McCool, Moisey and Nickerson (2001) | Miller (2001) | World Tourism Organization (2004) | Deery, Jago and Fredline (2005) | Choi and Sirikaya (2006) | |
| Background | Resident population | | | X | X | | |
| | Visitors to the Area | X | | | X | | |
| | Land use, Particularly Tourism Development | | | | X | | |
| Social Environment | Access, especially parking | | X* | X | X | | |
| | Highway traffic count | X | X* | | | X | |
| | Housing Affordability | | | X | X | X | |
| | Business Success | | | | X | | |
| | Safety in the Community | | | X | X | X | |
| | Crowding | | | | X | X | |
| | Tourism Development | | | | X | | |
| | Resident attitudes towards tourism | X | | X | | X | |
| | Pressure on Health and Social Services | | | X | X | X | |
| | Pressure on Police | | | | X | X | |
| | Number of Complaints by local residents | | | X | | | |
| | Positive Participation in Community Activities | | | X | X | X | |
| | Change in Character of Local Community Such as Development of Local Community Groups | | X* | | | X | |
| | Maintenance of Cultural Heritage Through Enhancement of Attractions | | X* | X | X | | |
| | Resident perceptions of quality of life | X | | X | | X | |
| | Cultural Development: events (number and type) | | | X | X | | |
| | Increased Awareness of Destination (Increased Visitation) | | | | X | X | |
| | Increased Awareness of Destination (New Investment/Business Opportunity in the Region) | | | | X | X | |
| | Change in Crime Patterns | X | | | X | X | X |

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| | Change in Social Problems (e.g., alcohol, drugs) | | | X | X | X |
| | Malnutrition | | | X | | |
| | Family Support | | | X | | X |
| | Education and Training | | X* | X | | |
| *Classified as “environmental indicators” by Miller (2001) | | | | | | |

It is interesting to note, however, that to date no widely accepted method of measuring social capital in tourism has been developed.

Environmental Indicators. Environmental indicators suggested by researchers are varied. Miller (2001) conducted a study to develop indicators in the UK and in Australia, Lundie, Dwyer and Forsyth (2007) suggested measures focused on energy use, water use, greenhouse gas emissions and ecological footprint. Others have generated a more complete list, for example, the most recent list generated by the WTO (2004) who polled 62 experts from more than 20 countries, is the most comprehensive resource on this topic. Their list includes management of natural resources (waste, water, energy, etc.), climate change, visual impact of tourism and measuring the impact of tourism on the natural environment. More recently, Choi and Sirakaya (2006) reinforced the efficacy of this list when a panel of 38 academics reached consensus on a total of 25 environmental (ecological) indicators, the majority of which duplicate those of the WTO (2004). A comparison of environmental indicators that have emerged from previous research are listed in Table 5.

| Theme | Indicators | Study | | | | |
|--|--|--|------------------|--|--------------------------------|---|
| | | McCool, Moisey & Nickerson (2001) | Miller (2001) | World Tourism Organization (2004) | Choi and Sirikaya (2006) | Lundie, Dwyer & Forsyth (2007) |
| Tourism as a Contributor to Nature Conservation | Measuring impact of tourism on natural environment | | X | X | X | |
| | Financing for biodiversity conservation and maintenance of protected areas | | | X | | |
| | Site-specific regulations | | | X | X | X |

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| | Provision of opportunities for participation by tourists in conservation | | X | X | | |
| | Intensity of use | | | X | X | |
| | Managing scarce resources | | | X | X | X |
| | Greenhouse gas emissions | | | X | | X |
| | Water availability and conservation | X | | X | X | X |
| Limiting Environmental Impacts of Tourism Activity | Sewage treatment | X | | X | X | |
| | Solid waste management | | | X | X | |
| | water pollution | | X | X | X | |
| | Air pollution | | X | X | X | |
| | Controlling Noise Levels | | X | X | X | |
| | Managing Visual impacts of Tourism | | | X | X | X |

A review of Tables 3 through 5 suggests that the list of economic, social and environmental indicators of tourism developed by the World Tourism Organization (2004) and published in a guidebook of indicators of sustainable development for tourism destinations is still the most comprehensive and useful set of measures (See Appendix A). Consequently, it is suggested that this set of measures appears to offer the greatest potential in developing a widely accepted, comprehensive list of sustainable tourism indicators. It also appears that it is appropriate to develop destination-specific indicators and a comparison across destination types (e.g., urban, rural, coastal, etc.) and at different levels (state, region, community) to properly document sustainable tourism impact across the different tourism sectors (WTO, 2004; Lundie, Dwyer and Forsyth, 2007; Dwyer and Forsyth, 2008). To date, however, it appears that limited research has been undertaken to measure sustainable tourism impact on a segment-by-segment basis and that there is still much work to be done in this important area.

Utility of TBL for Evaluation of Tourism Development Projects

One question that must be addressed when applying triple bottom line thinking to tourism development projects is whether synergies can be achieved between the tourism development organization and the community within which the tourism organization operates. The previous sections delineated the benefits of the TBL approach for the local communities, but what benefits accrue to the tourism organization for implementing the TBL?

Dwyer (2005) provided insight into the benefits that accrue to the tourism development organization resulting from the adoption of the TBL approach. Included in these benefits are efficiencies and cost savings, improved market positioning, better stakeholder relations, improved strategic decision making along with benefits to the wider community.

With regard to efficiencies and cost savings, TBL reporting can identify potential cost savings such as reduced operating costs via the reduction of materials and energy use, enhanced operational and design efficiencies, recycling and reusing wastes, as well as reduced transportation storage and packaging costs. Lower compliance costs may result if regulators have a better understanding of an organization's operations. Human resource costs may be reduced when employees are attracted and retained by an organization that focuses on community and environmental values. Finally, capital costs may be reduced as the organization has improved access to "green" and "ethical" investment funds (Dwyer, 2005).

From a marketing perspective, tourism development organizations can benefit from adopting the TBL approach through improved market positioning. Improved market positioning can result when the organization's brand image is enhanced when consumers become aware of the environmental and social sensitivity of the organization. In addition, the competitive differentiation afforded by the TBL approach can assist the organization in appealing to new markets, and encouraging repeat visitation (Dwyer, 2005).

Enhanced tourism development organization stakeholder relationships can result as the organization's beneficial activities permeate throughout the community fostered by increased transparency. These enhanced relationships can also provide a competitive advantage as the organization's positive reputation is communicated among stakeholders strengthening the organization's brand (Dwyer, 2005).

Finally, adopting the TBL approach can improve a tourism development organization's strategic decision making. The TBL approach forces the organization to focus on managing those tasks that get measured, systematize the best practices and benchmarks, improve risk management activities, improve the quality of information for decision makers, and facilitate information sharing throughout the organization which promotes integrated decision making within the organization and with other organizations in the community (Dwyer, 2005).

Given the usefulness of the triple bottom line approach for tourism development organizations, measures were developed that were designed to assess the degree to which tourism development projects achieved the three triple bottom line objectives (economic, social and environmental). The following section discusses the development of these measures.

Measurement Development Procedure

Based upon the previous literature review, a set of 115 items were adapted from *Indicators of Sustainable Development for Tourism Destinations: A Guidebook* (2004). Of the 115 items adopted, 53 items were thought to measure the social bottom line; 23 items were thought to measure the environmental bottom line, and 39 items were thought to measure the economic bottom line (see Table 6).

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| Table 6 Initial Triple Bottom Line Indicators |
| Social Indicators |
| Degree to which this tourism development project impacts local satisfaction with tourism |
| Degree to which this tourism development project impacts the number of tourism complaints by local residents |
| Degree to which this tourism development project impacts community social services |
| Degree to which this tourism development project impacts local infrastructure |
| Degree to which this tourism development project impacts community participation rate in tourism |
| Degree to which this tourism development project impacts the number of tourists per day |
| Degree to which this tourism development project impacts the ratio of number of tourists to locals |
| Degree to which this tourism development project impacts the number of tourists per square mile |
| Degree to which this tourism development project impacts the preservation of the local culture |
| Degree to which this tourism development project impacts traditional occupations in the local community |
| Degree to which this tourism development project impacts residents continuing with local customs |
| Degree to which this tourism development project impacts residents continuing with local language |
| Degree to which this tourism development project impacts locals continuing with local music |
| Degree to which this tourism development project impacts locals continuing with local cuisine |
| Degree to which this tourism development project impacts cultural activities |
| Degree to which this tourism development project impacts affordable housing for local residents |
| Degree to which this tourism development project impacts the distance locals must travel to work |
| Degree to which this tourism development project impacts the number of local residents that left the community last year |
| Degree to which this tourism development project impacts the number of people from outside the local community taking tourism jobs in the past year |
| Degree to which this tourism development project impacts net migration in/out of the local community |
| Degree to which this tourism development project impacts the costs of local assets to community residents |
| Degree to which this tourism development project impacts the number of complaints by community residents regarding tourism |
| Degree to which this tourism development project impacts conserving local cultural sites |
| Degree to which this tourism development project impacts the local community in conserving local monuments |
| Degree to which this tourism development project impacts the local community by minimizing damage to local heritage sites |
| Degree to which this tourism development project impacts the maintenance and preservation of local cultural/heritage sites |
| Degree to which this tourism development project impacts local effluent treatment facilities |
| Degree to which this tourism development project impacts the local community by supporting local noise regulations |
| Degree to which this tourism development project impacts the local community by supporting local congestion regulations |

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| Degree to which this tourism development project impacts the local community by enforcing local alcohol regulations |
| Degree to which this tourism development project impacts tourist behavior near residential communities |
| Degree to which this tourism development project impacts tourist behavior near children's play areas |
| Degree to which this tourism development project impacts local education programs on substance abuse |
| Degree to which this tourism development project impacts local health programs for substance abuse |
| Degree to which this tourism development project impacts a smoke free environment |
| Degree to which this tourism development project impacts childcare facilities for workers |
| Degree to which this tourism development project impacts family-friendly work shifts |
| Social Indicators (Continued) |
| Degree to which this tourism development project impacts the number of scholarships for local residents |
| Degree to which this tourism development project impacts training programs for local residents |
| Degree to which this tourism development project impacts work programs for local residents |
| Degree to which this tourism development project impacts local community's ability to provide drinking water |
| The degree to which this tourism development project impacts local community's ability to provide waste disposal |
| The degree to which this tourism development project impacts local community's ability to provide sewage treatment |
| Degree to which this tourism development project impacts the number of crimes involving tourists |
| Degree to which this tourism development project impacts community needs development |
| Degree to which this tourism development project impacts local parking |
| Degree to which this tourism development project impacts pressure on local health services |
| Degree to which this tourism development project impacts pressure on police |
| Degree to which this tourism development project impacts the number of local community groups |
| Degree to which this tourism development project impacts local senior citizens |
| The degree to which this tourism development project impacts community sports programs |
| The degree to which this tourism development project impacts community festivals and events |
| The degree to which this tourism development project impacts community wellness centers |
| Environmental Indicators |
| Degree to which this tourism development project impacts the number of local environmental assessment projects |
| Degree to which this tourism development project impacts the number of local conservation projects |
| Degree to which this tourism development project impacts the number of local protected areas |
| Degree to which this tourism development project impacts local tourist group size |
| Degree to which this tourism development project impacts local environmentally friendly modes of transport |
| Degree to which this tourism development project impacts local environmentally friendly waste disposal methods |
| Degree to which this tourism development project impacts local noise pollution |
| Degree to which this tourism development project impacts opportunities for tourists to practice |

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| conservation (recycling, etc.) |
| Degree to which this tourism development project impacts local ordinances to minimize environmental impacts |
| Degree to which this tourism development project impacts the number of tourists to the local community |
| Degree to which this tourism development project impacts energy consumption |
| Degree to which this tourism development project impacts local use of renewable energy sources |
| Degree to which this tourism development project impacts local greenhouse gas emissions |
| Degree to which this tourism development project impacts local water consumption |
| Degree to which this tourism development project impacts local recapturing and reuse of water |
| Degree to which this tourism development project impacts sewage treatment in the local community |
| Degree to which this tourism development project impacts solid waste disposal in the local community |
| Degree to which this tourism development project impacts air pollution in the local community |
| Degree to which this tourism development project impacts noise pollution in the local community |
| Degree to which this tourism development project impacts the local visual landscape |
| Degree to which this tourism development project impacts the loss of open land in the local community |
| Environmental Indicators (Continued) |
| Degree to which this tourism development project impacts public open spaces such as parks |
| Degree to which this tourism development project impacts suppliers' waste management activities |
| Economic Indicators |
| Degree to which this tourism development project impacts local community development programs |
| Degree to which this tourism development project impacts the local community's cultural values |
| Degree of local skilled labor for this tourism development project |
| Degree to which this tourism development project impacts local community natural resource management programs |
| Satisfaction of employees of this tourism development project |
| Percent of jobs provided by this tourism development project that are less than six months per year |
| Degree to which this tourism development project impacts local community cash needs |
| Degree to which this tourism development project impacts the local community's physical security |
| Degree to which this tourism development project impacts local community training programs |
| Degree to which this tourism development project impacts the local community's educational programs |
| Degree to which this tourism development project impacts the local community via tourism taxes |
| Opportunities for promotion for employees of this tourism development project |
| Degree to which this tourism development project impacts low seasons |
| Degree to which this tourism development project impacts the local community's income |
| Percentage of jobs provided by this tourism development project that are full-time jobs |
| Total number of jobs provided by this tourism development project |
| Months per year this tourism development project operates |
| Percent of jobs provided by this tourism development project that are full-year |
| Yearly revenue of this tourism development project |

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| Degree to which this tourism development project impacts the local community's health management programs |
| Asset value of this tourism development project |
| Degree to which this tourism development project impacts employee decision making |
| Frequency of employee training programs for this tourism development project |
| Number of workplace accidents for this tourism development project |
| Degree to which this tourism development project impacts local community conservation programs |
| Employee retention rate of this tourism development project |
| Average total local tourist spending at this tourism development project |
| Degree to which this tourism development project impacts local community food security |
| Degree to which this tourism development project impacts suppliers' waste management activities |
| Percentage of employees of this tourism development project that are qualified/certified/degreed |
| Degree to which this tourism development project impacts the local community's poor |
| Degree to which this tourism development project impacts local community infrastructure |
| Training funds spent per employee of this tourism development project |
| Degree to which this tourism development project impacts employee family income |
| Degree to which this tourism development project impacts shoulder seasons |
| Economic Indicators (Continued) |
| Degree to which this tourism development project impacts local employment opportunities |
| Per person fees charged for this tourism development project |
| Income levels of employees of this tourism development project |
| Degree to which this tourism development project impacts the operation and support of micro, small, and medium sized enterprises (MSMEs) |

After the items were identified, they were each placed on individual cards for a sorting task that was completed by two experts from the RTS Advisory Board. For purposes of sorting the items the board members were provided with the following definitions for each of the TBL dimensions:

The Economic Dimension: Refers to the financial 'revenue' shared by all commerce but also includes the additional economic benefits enjoyed by the host society.

The Social Dimension: Sometimes called social capital or community well-being, refers to the human capital provided by employees, contractors, suppliers, and advisors as well as investment in the social and cultural systems that support an organization.

The Environmental Dimension: Sometimes called natural capital, refers to the availability of natural resources upon which society's existence depends.

The sorting task involved categorizing each of the 115 items into one of four categories, the economic dimension, the social dimension, the environmental dimension, and a fourth "none of the above" category.

After the sorting task was completed, an examination for consensus was undertaken. Items were eliminated if there was no category consensus between the researchers and the two experts. Items were re-categorized by majority decision. As a result of this process, 92 items remained in the scales, 44 that measure the social dimension, 20 that measure the economic dimension, and 28 that measure the environmental dimension. Table 7 presents the final triple bottom line indicators.

| Table 7 Final Triple Bottom Line Indicators | |
|--|--|
| Social Indicators | |
| 1 | Degree to which this tourism development project impacts local satisfaction with tourism |
| 2 | Degree to which this tourism development project impacts the number of tourism complaints by local residents |
| 3 | Degree to which this tourism development project impacts community social services |
| 4 | Degree to which this tourism development project impacts local community development programs |
| 5 | Degree to which this tourism development project impacts community participation rate in tourism |
| 6 | Degree to which this tourism development project impacts the local community's cultural values |
| 7 | Degree of local skilled labor for this tourism development project |
| 8 | Degree to which this tourism development project impacts the local community's physical security |
| 9 | Degree to which this tourism development project impacts the preservation of the local culture |
| 10 | Degree to which this tourism development project impacts the local community's educational programs |
| 11 | Degree to which this tourism development project impacts residents continuing with local customs |
| 12 | Degree to which this tourism development project impacts residents continuing with local language |
| 13 | Degree to which this tourism development project impacts locals continuing with local music |
| 14 | Degree to which this tourism development project impacts locals continuing with local cuisine |
| 15 | Degree to which this tourism development project impacts cultural activities |
| 16 | Degree to which this tourism development project impacts affordable housing for local residents |
| 17 | Degree to which this tourism development project impacts the local community's health management programs |
| 18 | Degree to which this tourism development project impacts the number of local residents that left the community last year |
| 19 | Frequency of employee training programs for this tourism development project |
| 20 | Degree to which this tourism development project impacts net migration in/out of the local community |
| 21 | Degree to which this tourism development project impacts local community food security |
| 22 | Degree to which this tourism development project impacts the number of complaints by community residents regarding tourism |
| 23 | Degree to which this tourism development project impacts conserving local cultural sites |
| 24 | Degree to which this tourism development project impacts the local community in conserving local monuments |

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| 25 | Degree to which this tourism development project impacts the local community by minimizing damage to local heritage sites |
| 26 | Degree to which this tourism development project impacts the maintenance and preservation of local cultural/heritage sites |
| 27 | Percentage of employees of this tourism development project that are qualified/certified/degreed |
| 28 | Degree to which this tourism development project impacts the local community's poor |
| 29 | Degree to which this tourism development project impacts the local community by enforcing local alcohol regulations |
| 30 | Degree to which this tourism development project impacts tourist behavior near children's play areas |
| 31 | Degree to which this tourism development project impacts local education programs on substance abuse |
| 32 | Degree to which this tourism development project impacts local health programs for substance abuse |
| 33 | Degree to which this tourism development project impacts childcare facilities for workers |
| 34 | Degree to which this tourism development project impacts family-friendly work shifts |
| 35 | Degree to which this tourism development project impacts training programs for local residents |
| 36 | Degree to which this tourism development project impacts work programs for local residents |
| 37 | Degree to which this tourism development project impacts the number of crimes involving tourists |
| 38 | Degree to which this tourism development project impacts pressure on local health services |
| 39 | Degree to which this tourism development project impacts pressure on police |
| 40 | Degree to which this tourism development project impacts the number of local community groups |
| 41 | Degree to which this tourism development project impacts local senior citizens |
| 42 | The degree to which this tourism development project impacts community sports programs |
| 43 | The degree to which this tourism development project impacts community festivals and events |
| 44 | The degree to which this tourism development project impacts community wellness centers |
| Economic Indicators | |
| 1 | Degree to which this tourism development project impacts the number of people from outside the local community taking tourism jobs in the past year |
| 2 | Degree to which this tourism development project impacts local community natural resource management programs |
| 3 | Percent of jobs provided by this tourism development project that are less than six months per year |
| 4 | Degree to which this tourism development project impacts the local community via tourism taxes |
| 5 | Opportunities for promotion for employees of this tourism development project |
| 6 | Degree to which this tourism development project impacts low seasons |
| 7 | Degree to which this tourism development project impacts the local community's income |
| 8 | Percentage of jobs provided by this tourism development project that are full-time jobs |
| 9 | Total number of jobs provided by this tourism development project |
| 10 | Months per year this tourism development project operates |
| 11 | Percent of jobs provided by this tourism development project that are full-year |
| 12 | Yearly revenue of this tourism development project |

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| 13 | Asset value of this tourism development project |
| 14 | Employee retention rate of this tourism development project |
| 15 | Average total local tourist spending at this tourism development project |
| 16 | Degree to which this tourism development project impacts employee family income |
| 17 | Degree to which this tourism development project impacts local employment opportunities |
| 18 | Per person fees charged for this tourism development project |
| 19 | Income levels of employees of this tourism development project |
| 20 | Degree to which this tourism development project impacts the operation and support of micro, small, and medium sized enterprises (MSMEs) |
| Environmental Indicators | |
| 1 | Degree to which this tourism development project impacts local effluent treatment facilities |
| 2 | Degree to which this tourism development project impacts the local community by supporting local noise regulations |
| 3 | Degree to which this tourism development project impacts the local community by supporting local congestion regulations |
| 4 | Degree to which this tourism development project impacts a smoke free environment |
| 5 | Degree to which this tourism development project impacts local community's ability to provide drinking water |
| 6 | Degree to which this tourism development project impacts local community conservation programs |
| 7 | Degree to which this tourism development project impacts suppliers' waste management activities |
| 8 | Degree to which this tourism development project impacts the number of local environmental assessment projects |
| 9 | Degree to which this tourism development project impacts the number of local conservation projects |
| 10 | Degree to which this tourism development project impacts the number of local protected areas |
| 11 | Degree to which this tourism development project impacts local environmentally friendly modes of transport |
| 12 | Degree to which this tourism development project impacts local environmentally friendly waste disposal methods |
| 13 | Degree to which this tourism development project impacts local noise pollution |
| 14 | Degree to which this tourism development project impacts opportunities for tourists to practice conservation (recycling, etc.) |
| 15 | Degree to which this tourism development project impacts local ordinances to minimize environmental impacts |
| 16 | Degree to which this tourism development project impacts energy consumption |
| 17 | Degree to which this tourism development project impacts local use of renewable energy sources |
| 18 | Degree to which this tourism development project impacts local greenhouse gas emissions |
| 19 | Degree to which this tourism development project impacts local water consumption |
| 20 | Degree to which this tourism development project impacts local recapturing and reuse of water |
| 21 | Degree to which this tourism development project impacts sewage treatment in the local community |
| 22 | Degree to which this tourism development project impacts solid waste disposal in the local community |
| 23 | Degree to which this tourism development project impacts air pollution in the local community |

| | |
|----|---|
| 24 | Degree to which this tourism development project impacts noise pollution in the local community |
| 25 | Degree to which this tourism development project impacts the local visual landscape |
| 26 | Degree to which this tourism development project impacts the loss of open land in the local community |
| 27 | Degree to which this tourism development project impacts public open spaces such as parks |
| 28 | Degree to which this tourism development project impacts suppliers' waste management activities |

Preliminary Survey Design Ideas

After identifying the measures of the triple bottom line for tourism development organizations, a survey instrument was developed to collect data from each tourism development organization. The sample survey instrument is presented in Appendix 1. For each tourism development project it is envisioned that multiple respondents will respond to the triple bottom line questionnaire. Means and standard deviations will be computed for each questionnaire item and grand means will be computed for each of the social, economic and environmental dimension of the triple bottom line for each tourism development project. The grand means for the social and environmental dimensions can then be used as input for assessment of the extent to which each tourism development project pursues a social and environmental agenda. The following section discusses the assessment technique that is being contemplated for the tourism development projects.

Assessment of the Results

Subsequent to calculating the grand means for the social and environmental dimensions, each tourism development project can be plotted on a graph where the X-axis represents the mean of the social dimension and the Y-axis represents the mean of the environmental dimension (for each tourism development project). Figure 2 shows such a graph which we label the social-environmental tourism project evaluation matrix.

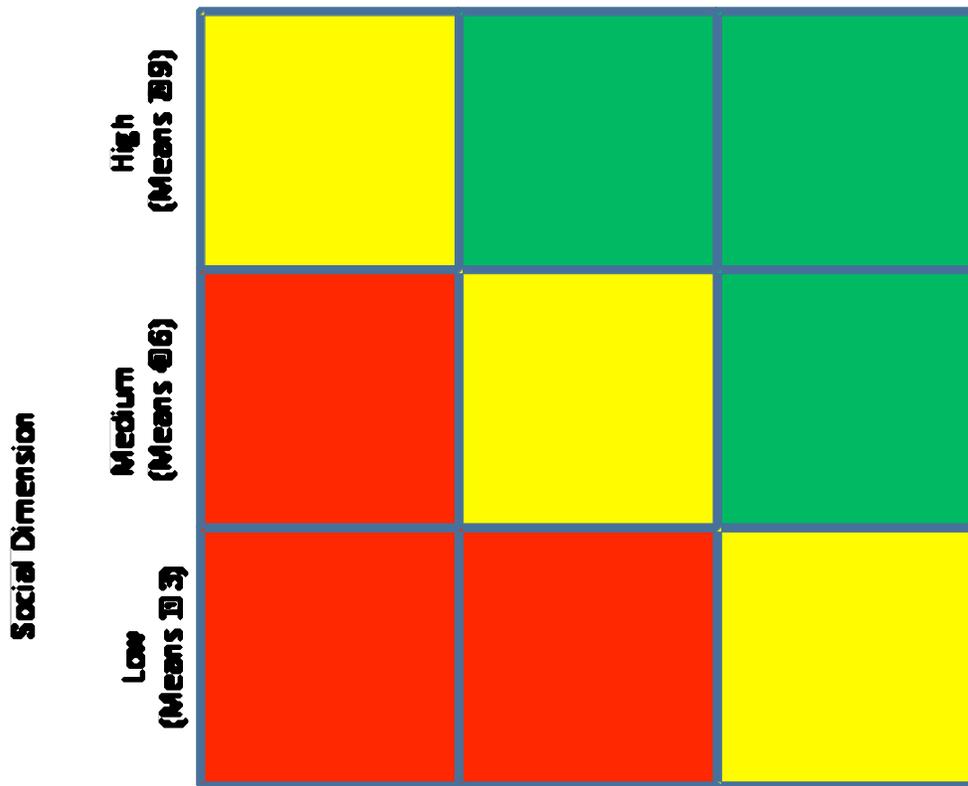


Figure 2: The Social-Environmental Tourism Project Evaluation Matrix.

As Figure 2 shows, plotting each tourism development project will allow for the assessment of projects in both an absolute and relative sense. From the absolute perspective projects can be assessed on a scale of “goodness.” Here, a bad project might be one whose grand environmental mean and grand social mean is 1 to 3 on the 9-point scale. Moderate projects might be those whose grand environmental and social means fall within the range of 4 - 6 on the scale. Good projects might be those whose grand environmental and social means fall within the range of 7 - 9 on the scale. Finally, with regard to the relative perspective, plotting tourism development projects relative to each other might allow for generalizations as to which *types of projects* might be more likely to be environmentally and socially cognizant.

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Appendix G. Sustainable Development / Triple Bottom Line Literature Review

Formulating a Sustainable Economic Development Process for Rural America

Sustainable Development / Triple Bottom Line Literature Review



DRAFT March 27, 2008 *DRAFT*

Prepared for:

Regional Technology Strategies, Inc.
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Prepared by:

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Formulating a Sustainable Economic Development Process for Rural America

Task: Sustainable Development / Triple Bottom Line Literature Review

The goals of the rural economic development portfolio in the Economic Development unit of the Ford Foundation are to figure out how “to increase the ownership of wealth by residents of rural America through the employment of triple bottom line (TBL) development practices” and “how to measure the results”. The Ford Foundation proposal suggests that a “semantic transition”, from sustainability to triple bottom line, is necessary to make sustainability a practical concept for alleviating rural poverty. The overall hypothesis being tested is whether cluster-based development, value chain connections, entrepreneurship training, and increasing the availability of financial services can be combined into a single development model incorporating a TBL economic development and evaluation process.

A sub-task of the Ford Foundation proposal, and the purpose of this report, is to conduct a literature review for Regional Technology Strategies, Inc., that addresses “how triple bottom line approaches have been integrated into project activities and goals and how they have been used in evaluating tourism, cultural heritage and natural resource based projects both in the U.S. and overseas. The review, in the course, of this task will also address how different definitions of triple bottom line approaches impact evaluation metrics.”

The rest of this report:

- ▶ Defines the theory and practice of sustainable development (e.g., why is there a perception that sustainable development is not a practical concept?)
- ▶ Defines the triple bottom line and provides examples of its uses (e.g., what is a triple bottom line development practice?)
- ▶ Describes how sustainable development and triple bottom line are different (i.e., is a semantic transition from sustainability to triple bottom line advisable?)
- ▶ Uses sustainable tourism as an example of applying principles of sustainability and triple bottom line measurement
- ▶ Concludes by providing caveats/warnings/suggestions about the use of indicators

A tally of sustainable development indicators assembled to demonstrate the wide variety of potential indicators is attached as an Excel spreadsheet in the Appendix.

What is Sustainable Development?

Human societies necessarily exploit surrounding ecosystems in order to survive, but societies that flourish to the extent of overexploiting their ecosystems may destroy the basis of their own survival. It was in the context of continuing environmental degradation, growing inequality, and persistent poverty that the most commonly used definition of sustainable development was put forward by the

Freese starts with the proposition that “energy flows through ecosystems into sociocultural systems as the fundamental stuff of life support” (1997b: 84). Process 1 in his model describes the relationship between ecosystem energy production to variable rates of human energy expropriation. Depending on the level of energy expropriation, ecosystem resilience is either sustainably maintained or disorganized.

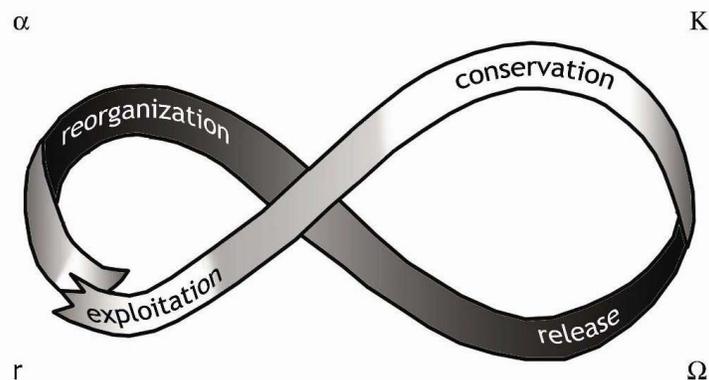
Process 2 describes the relationship between energy expropriation, subsistence organization, and development or collapse. As Smil (1994) and many others have documented, human energy expropriation lays the foundation for increasing complexity in human subsistence organization (i.e., the transition from hunting and gathering to agricultural production to industrialization). In other words, increases in energy expropriation are interrelated with increased technological complexity, rising population (e.g., due to increased food availability and decreased mortality), and divisions of labor, leading to more complex societies. Conversely, and in line with Tainter’s (1988) theory of societal collapse, societies that reduce energy expropriation—for whatever reason—face the possibility of dissolution.

Process 3 generally comes into play when a society develops beyond the hunting and gathering phase, when the intensification of production for subsistence “tests” the carrying capacity of the particular ecosystems sustaining them. Disorganized ecosystems can reduce the amount of energy available to societies and make the likelihood of their collapse more likely.

Processes 4 and 5 reflect a reorganization of social systems and ecosystems in tandem, based on levels of ecosystem energy production, energy expropriation, societal development, and ecosystem disorganization. Freese summarizes our modern predicament in the context of his model as follows: “To not live within real biophysical carry capacity in effect is to not live within sustainable ecological means, which is to say, to live in ways that nature’s evolutionary design does not permanently enable” (1997b: 214).

Before going further, a model called “panarchy” adds a layer of dynamism and helps to explain the status of each of the boxes in Figure 1. A panarchy is a set of “adaptive cycles” (Figure 2) nested or linked at progressively larger scales. Adaptive cycles are models of how social systems and ecosystems develop, collapse, and reorganize (Gunderson and Holling, 2002).

Figure 2. Adaptive Cycle



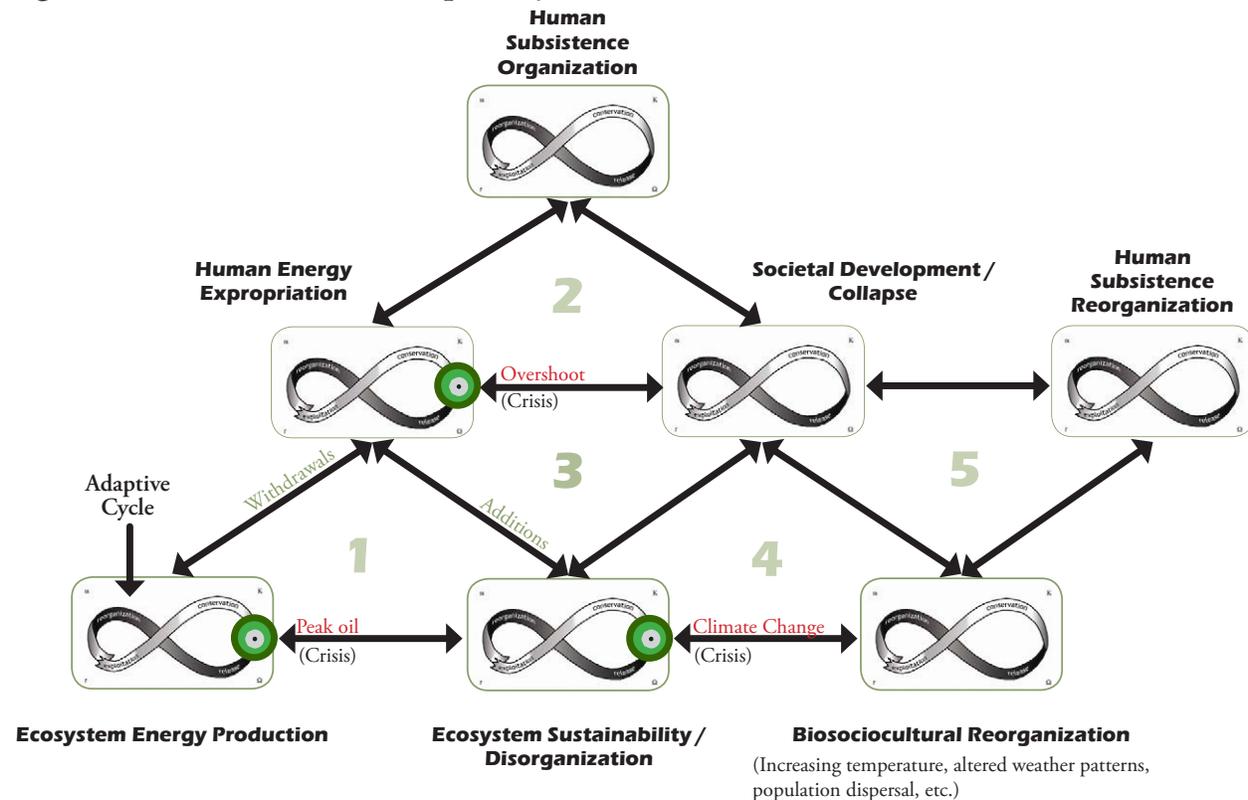
Source: Gunderson and Holling, 2002.

In the panarchy model, the “r phase” or exploitation phase refers, for example, to the colonization of recently disturbed areas in ecosystems or open competition in markets in social systems. The front-loop stage, from r to K, represents the slow, incremental phase of growth, accumulation and development (e.g., of forests, Microsoft, and bureaucracies). In this stage, winners expand, grow, and accumulate potential from resources acquired (e.g., the Republican party) or ecosystems accumulate and store energy and material. As the system evolves to the “K phase” or conservation phase, connectivity among the survivors intensifies, and new species find it difficult to enter the ecosystem or entrepreneurs find it difficult to enter existing markets. The tightly bound accumulation of biomass and nutrients or social relations in the K phase becomes increasingly fragile until suddenly released by agents (Ω) such as forest fires, insect pests, wars or social movements. It is in the K to Ω phase that the panarchy theorists say that all systems become accidents waiting to happen. The back-loop phase, from Ω to α , represents an increase in uncertainty and danger, as well as opportunity, renewal and surprise.

Panarchy scholars are concerned with the resiliency of social-ecological systems. Resiliency refers to maintaining system integrity in the midst of disturbance, and the ultimate goal of resilience management is to “prevent the system from moving to undesired system configurations” and to “nurture and preserve the elements that enable the system to renew and reorganize itself following a massive change” (Walker et al., 2002). Identifying “thresholds”, particularly prior to the turbulent K to Ω phase, is key to preparing for, mitigating against, and adapting to disturbances.

Replacing each of the boxes in Freese’s model with adaptive cycles (Figure 3) gives a fuller sense of what it means to be practicing sustainable development or unsustainable development.

Figure 3. Freese’s Model with Adaptive Cycles



For example, many scholars have converged on three major causal factors undermining past civilizations: societies can overshoot the carrying capacity of their ecosystems by (1) **depleting natural resources** while simultaneously (2) **degrading ecosystems** (e.g., deforestation). Past societies experiencing sudden and prolonged (3) **climatic events**, such as droughts, face the possibility of collapse, and climate changes that intersect with resource depletion and ecosystem degradation increase the possibility of collapse (Good and Reuveny, 2006; Diamond, 2005; Fagan, 2004; Janssen and Schaffer, 2004; Thompson, 2004; Wilkinson, 2004; Weiss and Bradley, 2002; Chew, 2001; De Menocal, 2001; Fernandez-Armesto, 2001; Tainter, 2000, 1996, 1988; Eisenberg, 1998; Ponting, 1991; Catton, 1982; Hughes, 1975). That is, past societal collapses have been triggered by the crossing of K to Ω thresholds, either as the result of human behavior (e.g., deforestation or damaged soils due to agricultural practices) or ecological transitions (e.g., droughts).

Returning now to the example of energy as an indicator of sustainable or unsustainable development, it would appear that K to Ω thresholds have been crossed or are in the process of being crossed throughout Freese's model:

► **Ecosystem Energy Production: Peak Oil.** Energy in the form of sunlight drives photosynthesis in plants, which purifies the air, helps to regulate climate and provides food for life forms on Earth. Human societies convert ecosystem energy flows into resources such as food, shelter and energy, and to power a wide range of other activities. Human societies depended on *renewable*, solar powered biomass for fuel, shelter, tools, and other items for most of human history.

In contrast to sunlight and biomass, fossil fuels—oil, natural gas and coal—are a onetime endowment of *nonrenewable* resources. The conditions under which oil and natural gas were formed were quite specific and “Oilfields cover less than 0.1 percent of the continents and continental shelves” (Deffeyes, 2005: 17). Oil reservoirs formed over hundreds of millions of years. The first oil boom began in 1859 in Pennsylvania. In the 148 years since, societies have become utterly dependent on fossil fuels, particularly oil, for energy and a large range of other uses.

Researchers such as M. King Hubbert (1976), Kenneth Deffeyes (2005) and Colin Campbell (2002) think Earth's total endowment of oil is slightly more than 2 trillion barrels. Furthermore, these researchers believe that world oil production will soon cross the K to Ω threshold, it will “peak” in the near future, if it hasn't already (worldwide oil production appears to have hit a plateau of 85 million barrels produced per day in 2005. It has not crossed above that level since). Peak oil, which refers to the moment when half of the oil that ever existed is removed from the ground, means that the supply of readily available oil and oil-related products will *decrease*, while demand around the world continues to *increase*. Peak oil has implications for how we live, where we live, what we can do and where we can go. For example, the price of oil recently reached an all-time high of \$110 a barrel and the implications of this fact are ratcheting throughout the world.

► **Human Energy Expropriation: Overshot Carrying Capacity.** For the majority of human existence we lived in small bands and subsisted by gathering plants and hunting animals, that is, our ancestors depended on *renewable* biomass for fuel, food, tools, and other items for most of history. With the domestication of certain plants and animals between 10,000 and 12,000 years ago, our population grew. However, it took the harnessing of *nonrenewable* energy power—first coal and then

oil—for world population to top 1 billion around 1900. Since then, world population has skyrocketed with an additional 5 billion people.

The harnessing of fossil energy power, especially oil, radically changed the trajectories of social systems *and* ecosystems. The West, and particularly the United States, secured its power and influence throughout the 20th Century by securing increasing amounts of energy. At the same time, human impacts on the environment have amplified. For example, the United Nations recent *Millennium Ecosystem Assessment Synthesis Report*, subtitled *Our Human Planet* (2006), revealed that people are transforming ecosystems throughout the world at a faster and more extensive pace than any other time in human history. Of particular significance, this compilation of expertise from more than 2,000 authors and reviewers finds that 60 percent (15 out of 24) of the major ecosystems examined are being used unsustainably; the changes being made to these ecosystems are increasing the likelihood of “nonlinear” changes (e.g., the emergence of diseases and unpredictable events); and poor people are disproportionately being impacted by the harmful effects of ecosystem degradation. The litany of problems identified by the United Nations and many other sources provide evidence that a series of thresholds have been passed or have the potential of being passed, culminating with the notion that humans have exceeded the carrying capacity of the planet (Catton, 1982).

► **Ecosystem Sustainability/Disorganization: *Climate Change*.** Ecosystems such as oceans and forests, Costanza et al (1997: 254) explain, provide the full range of support functions necessary for life on Earth. Costanza et al., place the value of Earth’s services at somewhere between U.S. \$16–54 trillion per year, while global gross national product total is around U.S. \$18 trillion per year (1997: 253). At the same, time, as the *Millennium Ecosystem Assessment* and other sources have made clear, human disturbances are increasingly damaging and disorganizing the services that ecosystems provide.

Ecosystem sustainability in this example of energy use has less to do with the impacts of oil extraction or the familiar instances of oil spills. Rather, the combustion of fossil fuels has released stored carbon and other gases into the atmosphere, warming the planet and upsetting the balance of ecosystems. For most of human evolution, Earth’s climate was generally unfavorable to widespread dispersal outside of Africa- ice sheets covered large expanses of the continents. For the past 10,000 years, however, Earth has experienced an interglacial known as the Holocene, or “long summer”, with a global average surface temperature of about 57°F (Fagan, 2004; Flannery 2005). It is during this temperate window that every continent except Antarctica was settled and everything we count as human civilization developed: domestication of major plants and animals, agriculture, cities, written language, etc. (Kolbert, 2006; Flannery, 2005; Diamond, 1997). That is, *long summer* conditions have been very favorable to energy expropriation (e.g., a warmer climate and longer growing seasons), subsistence organization, and societal development.

With the combustion of fossil fuels to power development since the Industrial Revolution, another K to Ω threshold is in the process of being crossed. Atmospheric carbon dioxide levels have gone from approximately 270 parts per million prior to industrialization to nearly 400 parts per million currently and rising (Dyson, 2005). In 1998, scientists in Antarctica drilled the deepest ice core ever recorded and found that carbon dioxide and methane levels are higher now than they have ever been in the past 420,000 years, going back farther than the Holocene (Petit et al., 1999: 433).

This increase in greenhouse gases is transforming ecosystems by changing Earth's climate: melting glaciers and ice sheets are raising ocean levels, altering weather patterns (e.g., increasing the frequency and severity of hurricanes, see Emmanuel, 2005), and changing the composition of local plants and animals (i.e., pushing many species to extinction, see Flannery, 2005). The 1990s were the hottest decade on record. 2005 was the warmest year on record. Global mean surface temperature is projected to increase over the next century, exacerbating all of these transformations.

► **Subsistence Organization:** For all of human history until the late 1690s, humans used solar power, biomass, wind power, animal power, and muscle for warmth, lighting, cooking, food production, travel (including sailing), and other activities. Then, in the late 1690s steam power was tinkered with. From there, a steady onslaught of technologies for energy conversion developed: high pressure steam engines, batteries, electricity, combustion engines, dynamite, refrigerators, rockets, nuclear reactors, etc. (Smil, 1994: 259-269). The hard path described by Amory Lovins has materialized: the energy industry, with support from governments, has built an “enormous network of oil wells, supertankers, pipelines, coal mines, power plants, transmission lines, cars, trucks, trains, and ships” (Roberts, 2004: 2) that supplies homes, farms, stores, buildings, factories, and vehicles with power.

Subsistence in the United States has also been predicated on converting forests, prairies, and other landscapes into farms, orchards, grazing range, and other food producing areas. The use of oil to power mechanized equipment (e.g., tractors), the development of refrigeration, and a transportation infrastructure meant that fewer farmers were required to grow more food that could reach dinner tables at farther and farther locations. The implication, again, is that a house of cards has been constructed on the foundation of a nonrenewable resource. As the other processes in Freese's model start to enter a K to Ω phase, it follows that human subsistence patterns will have to change.

► **Societal Development:** An amplification in the amount of energy expropriated both enables and is a requirement of more complex forms of political, urban, and economic organizations. According to Freese, in sedentary societies political organization became a means to “domesticate people”. With increased food surpluses and parcels of land brought into the fold, political organization became a “vessel for socially organizing and institutionalizing in human society, by means of force if not genuine authority supported by cultural values, systems of social inequality based on the control of valued resources and the means to produce, protect, and distribute them” (1997a: 171). From their origins as ceremonial meeting places, cities began to take hold wherever Neolithic agriculture, which is to say, intensifications in energy expropriation, became successful. Beyond organizing for survival, the city became a focal point for economic, political, and cultural activity, drawing in functions that had previously been scattered (Mumford, 1989 [1961]). Finally, larger and more complex economic organizations developed as humans provisioned themselves for subsistence and survival with greater amounts of energy. Toman and Jemelkova assert that “Expanded availability and use of energy services is strongly associated with economic development” (2003: 94).

Natural and geographical inequalities (the origins of which were outside of human control) laid the foundation for political, urban, and economic developments—including agents of conquest such as “steel swords, guns, ocean-going ships, political organization, writing, and epidemic diseases” (Diamond, 1997)—that Europeans used to secure and enhance land, resources, and other rewards. How did they do this? Tilly (1999) theorizes that rewards from resources are secured and enhanced

through exploitation and opportunity hoarding. Exploitation operates when powerful, connected people command resources (natural and human-made) from which they draw significantly increased returns by coordinating the efforts of outsiders whom they exclude from the full value added by that effort (1999: 10). Europeans and Americans systematically expropriated resources from Native Americans, while simultaneously committing genocide. Africans were enslaved in order to boost ecosystem energy production in the form of crops, which Europeans and Americans converted into economic gains. It is no coincidence that Mohai (1995) reports that “Nearly all of the studies over the past two decades have found that environmental hazards under investigation are inequitably distributed according to race or income or both” (615).

Contemporary industrial societies and their economic systems have been built on “a central belief that they can progress by conquering nature and expanding production” (Schnaiberg and Gould 1994: v). Over the past two decades, Allan Schnaiberg and his colleagues have elaborated and refined the “treadmill of production” model, characterizing the society-environment relation as an inexorable process in which economic actors (primarily corporations) use and degrade ecological resources in order to increase their accumulation of capital. Failure to do this would threaten profitability and the survival of firms (who are also driven to enhance profits by cutting labor costs and investing in capital-intensive technologies that, in turn, further increase the withdrawals of resources and energy from, and increased additions of waste and pollution to, ecosystems). Because corporate managers are constrained by the demand for expanding profits, there is enduring pressure to externalize true ecological and social costs.

When corporations are prodded to account for these costs (e.g., by governments, social movement organizations, public opinion) they tend to use their considerable influence (e.g., political lobbying and campaign contributions) to resist change (Schnaiberg and Gould 1994: 46). At the same time, workers (in order to have and maintain jobs) and governments (in order to provide for “national development” and “social security”) are also dependent on the treadmill of production and, therefore, must work to facilitate its expansion (Schnaiberg and Gould 1994: 69). Since the treadmill of production is strongly anti-ecological and societies around the planet are caught up in its continued operation, Schnaiberg and colleagues foresee enduring conflict between the economy and the environment at all levels: international, national, regional, local, and interpersonal.

Oil literally and figuratively greases the wheels of the treadmill of production. The ten largest corporations in the world, including six of the ten most profitable corporations in the world, and consultants paid by the oil industry such as Daniel Yergin, have a vested interest in debunking peak oil and climate change.

► **Collapse:** The geographer and historian Joseph Tainter defines collapse as “a rapid, significant loss of an established level of sociopolitical complexity” (1988: 4). Biogeographer Jared Diamond characterizes collapse as “a drastic decrease in human population size and/or political/economic/social complexity, over a considerable area, for an extended time” (2005: 3). In the run-up to and aftermath of collapse, societies experience a breakdown of authority and governance (including law and order), reduced trade and construction, population dispersal (from greater to lower density), and a general return to local self-sufficiency to meet the needs of a smaller population. In other words, the “overarching structure that provides support services to the population loses capability or disappears entirely” (Tainter, 1988: 20).

With the emergence of global climate change and global peak oil production, the old set of factors—resource depletion, ecosystem degradation, and climate change—have the potential to wreak havoc in new ways, as they impact every society on the planet at the same time, in ways that amplify other problems, and that realistically pose the threat of global societal collapse. In *The Long Emergency*, for example, James Kunstler predicts a future with severe losses “in population, in life expectancies, in standards of living, in the retention of knowledge and technology, and in decent behavior” (2005: 5).

► **Reorganization:** The preceding tour of Freese’s model of sustainable development described a perfect storm brewing: oil is the key energy resource used throughout the world, but ecosystems produced a nonrenewable amount that is rapidly being depleted by a growing human population. Human energy expropriation, particularly the combustion of fossil fuels, is warming the planet and consequently impairing ecosystem integrity.

The implications of this are of no small consequence since complex, technologically advanced societies have depended on ever increasing energy expropriation to power societal development, and a temperate window—the long summer—in which to develop. Nevertheless, biosociocultural reorganizations are already taking place in Freese’s model and the real world: ice sheets are melting, Alaskan villages are being relocated, coral reefs are dying, island nations are eyeing rising ocean levels, etc. But we do not know how human subsistence will ultimately be reorganized.

Sustainable development advocates believe that a less apocalyptic future is possible. **In the specific example of energy, societies can only meet the needs of the present without compromising the ability of future generations to meet their needs by conserving energy, using it more efficiently, and through a switchover to renewable energy (e.g., wind, solar, geothermal, hydro, biomass, biofuels, ocean tidal, waste, etc.).**

Unsustainable development, then, refers to societal dependency on an economic process—the “treadmill of production”—that requires increasing withdrawals of energy and material from ecosystems (and the generation of waste and pollution) in order to promote societal progress for some segments of society while further impoverishing other segments of society (Schnaiberg and Gould, 1994).

Whether referring to energy, water, forests, fish, minerals, or any other material or ecosystem service or flow, meeting the needs of the present without compromising the ability of future generations to meet their needs requires avoiding crossing K to Ω thresholds. Literature reviews in the fields of environmental sociology, ecological economics, environmental history, industrial ecology, and the emerging field of ‘sustainability science’, along with reports from governments, nongovernmental organizations, and other sustainable development advocates, reveals an interconnected core of principles that provide a kind of game plan for avoiding thresholds while defining the contours of sustainable development:

► **Social and Environmental Justice:** Advocates of social and environmental justice stress the need to promote opportunity and equity within our society, between societies, between generations, and between species.

- ▶ **Stewardship of Built and Natural Environment:** Stewardship advocates invoke Aldo Leopold’s well known concept of the land ethic to stress the need to maintain the resiliency of life support systems such as forests in perpetuity (Hawken et al., 1999), while historic preservation advocates and others stress the need to maintain the fabric of communities.
- ▶ **“Ecological Modernization”:** Advocates of ecological modernization, or natural capitalism (Hawken et al., 1999) stress the need to green societal institutions (e.g., economic institutions, political institutions) through changes in values, as well as changes in technology, such as biomimicry (Benyus, 1997), renewable energy, and “cradle-to-cradle” production processes (Mol and Sonnenfeld, 2000).



| Sustainable Development | Economic Development |
|--|---|
| Renewable Energy: wind, solar, geothermal, hydro, biomass, biofuels, ocean tidal, or waste | Nonrenewable Energy: Fossil fuels, nuclear, CO ₂ emissions |
| Energy Efficiency / Conservation | Inefficiency / Waste |
| Ecological Design: green building, smart growth, New Urbanism, historic preservation | Sprawl: low density, car and oil dependent, |
| Sustainable Agriculture: locally produced, organic, CSAs | Industrial Agricultural: 3,000 mile salad, pesticides, synthetic fertilizers, consolidations |
| Sustainable forestry: FSC certification | Unsustainable forestry: deforestation, illegal logging |
| Localism: Employee ownership, livable wages, fair trade | Globalization: sweatshops, fossil fuel dependent |
| Environmental Studies: Ecological economics / Environmental Education / Environmental Sociology, etc. | Economics: “fallacies of misplaced concreteness” in “the market”, “invisible hand”, and indicators such as GDP |
| Ecotourism / Sustainable Tourism: local ownership, conservation, low visitor impacts | Tourism: corporate ownership, adverse social, cultural and, environmental impacts |

For more examples, visit Conservation Economy (<http://www.conservationeconomy.net>)

Combining these three principles, the Natural Research Council says that the primary goals of a transition toward sustainability over the next two generations should be to meet the needs—food, water, energy, clothing, shelter, security, employment, education, health care, belonging, worth, community, etc.—of a much larger but stabilizing human population, to sustain the life support systems of the planet (e.g., ensuring the quality and supply of fresh water, controlling emissions into the atmosphere, protecting the oceans, and maintaining species and ecosystems), and to substantially reduce hunger and poverty by ensuring income growth, employment opportunities, and essential safety net services (1999: 31; see also Holdren, Daily, and Ehrlich, 1995).

Criticisms of Sustainable Development

Since its debut, the Brundtland Report definition has been criticized for being too vague while, at the same time, sustainable development has been accused of suffering from too many definitions and a lack of consistency (Hoffman and Bazerman, 2007; Lele, 1991). For example, Moffatt et al. (2001) report that over 100 definitions can be found in the literature on sustainable development. The vague / lack of definition critiques, however, have the unmistakable odor of a red herring. As the preceding example of energy demonstrated, there is a substantial body of knowledge on the meaning of sustainable development. At the same time, most definitions are variants of the conceptualization used by the Brundtland Report: they repeat the same concepts (i.e., avoid critical thresholds by integrating ethical, economic, social, and ecological concerns). For example:

- ▶ Hawken defines sustainability as “an economic state where the demands placed upon the environment by people and commerce can be met without reducing the capacity of the environment to provide for future generations” (1993: 139).
- ▶ Common writes that “To sustain is to support without collapse...the sustainability problem is taken to be: how to address problems of inequality and poverty in ways that do not affect the environment so as to reduce humanity’s future prospects” (1995: 1).
- ▶ Elkington says, “It’s the principle of ensuring that our actions today do not limit the range of economic, social, and environmental options open to future generations” (1998: 20).
- ▶ Meadows suggests that “sustainable development is a social construct, referring to the long-term evolution of a hugely complex system—the human population and economy embedded within the ecosystems and biogeochemical flows of the planet” (1998: 7).
- ▶ Berke and Conroy describe sustainable development as “a dynamic process in which communities anticipate and accommodate the needs of current and future generations in ways that reproduce and balance local social, economic, and ecological systems, and link local actions to global concerns” (2000: 23).
- ▶ Dryzek astutely points out that sustainable development is premised on the notion that “the legitimate development aspirations of the world’s peoples cannot be met by all countries following the growth path already taken by the industrialized countries, for such action would over-burden the world’s ecosystems;” however, since improving the conditions of the world’s poor is a desired inter-

national goal, economic growth should be promoted “in ways that are both environmentally benign and socially just. Justice here refers not only to distribution within the present generation, but also to distribution across future generations” (1997: 129).

Another type of criticism / observation reflects on the fact that “Sustainable development is nowhere an accomplished fact” (Dryzek, 1997: 123). That is, “the problem of envisioning a living sustainable community” is the “absence of any concrete examples” (Hempel, 1999: 44). But why is this really the case?

Schnaiberg and Gould correctly assert that just “espousing sustained development as a goal is insufficient to set in motion the societal processes that will lead to its dominance over competing goals” (1994: 3-4). What competing goals? Sustainable development fundamentally challenges the profit maximizing paradigm of the treadmill of production: there is “a *contest* between the tenets of capitalism and the tenets of sustainability” (Hoffman and Bazerman, 2007: 90, my emphasis).

Seen in this light, it was not vagueness that led the “World Bank and other economic development agencies” to misinterpret “sustainable development as perpetual growth, which is an extreme perversion of the original sense of the phrase” (Ayres, 1998: 2). Rather, the sustainability discourse is contested “by a variety of interests in a variety of ways as a means of supporting and enhancing their basis of power” (van der Duim, 2004: 368). As will be referenced in the sustainable tourism section, economic development interests, to date, have trumped sustainable development interests in every case cited.

Additionally, “Organizational arrangements and cultural beliefs tend to perpetuate unsustainable behavior” (Hoffman and Bazerman, 2007: 97). Within organizations, “authority to make and implement decisions is fragmented among a large number of agencies and organizations at multiple governance levels (municipality, state, federal)...Commonly, coordination among departments, agencies, and levels is limited or absent” (Beratan et al. 2004: 180). Even if managers, planners, and decision-makers wanted to move toward sustainability, many are constrained by a “lack the resources—time, staff, training, and money—required to change established procedures” (Beratan et al. 2004: 181).

What is the Triple Bottom Line?

The idea of sustainable development has been broadly applied, from agriculture, forestry, and fishing, to businesses, product design, and educational curricula. A corresponding “development of indicators has emerged as a “best practice” in moving towards sustainability” (Beratan et al., 2004: 184). Sustainability indicators have been used at the international, national, community, and business level. In the business community, the “triple bottom line” concept is generally used to refer to the measurement of a business’s performance based on three criteria: profitability, social equity, and environmental health. It is meant to be used to assess the complete impact of a business. A growing number of business success stories (e.g. Seventh Generation, <http://www.seventhgeneration.com>) demonstrate that such integration offers a significant competitive advantage. This advantage takes place through innovative product and service designs that eliminate inefficiencies and waste disposal costs inherent in many conventional business operations.

The gist of the triple bottom line argument is that social and environmental performance “can be measured in fairly objective ways, and that firms should use these results in order to improve their social (and environmental) performance. Moreover, they should report these results as a matter of principle, and in using and reporting on these additional “bottom lines” firms can be expected to do better by their financial bottom line in the long run” (Norman and MacDonald, 2004). The triple bottom line is seen as “a metaphor to remind us that corporate performance is multi-dimensional” (Pava, 2007: 108).

The phrase ‘triple bottom line’ is credited to John Elkington, particularly with the publication of *Cannibals with Forks* in 1998. Elkington was looking for a term that resonated with “business brains”. But the idea of a switchover in the way that corporations do business is not a new one. There are several published instances of ‘coming to the light’ moments, where CEOs describe how and why they came to the conclusion that they needed to change their businesses. The most famous example is probably Ray Anderson’s *Mid-Course Correction*, in which he describes how his “haunting role” in the devastation of the planet led him to radically change Interface (<http://www.interface.org>).

There is also a growing literature about how industrialized countries (or segments within these countries) such as Germany, Japan, Sweden, Norway, the Netherlands, and the United States appear to be going through a process of “ecological modernization.” Here it is suggested that high energy efficiency of national income (in terms of the amount of energy required to produce a unit of national income); low per capita emissions of pollutants; low per capita generation of household garbage and other solid wastes (Dryzek, 1997: 137) indicate that ‘free market capitalism’ can be transformed and redirected in such a way “that it less and less obstructs, and increasingly contributes to, the preservation of society’s sustenance base” (Mol and Spaargaren, 2000: 23).

For ecological modernization proponents, the “ecologization of the economy”, and society more generally, makes it possible for “an ecological switchover to take place which marks the end of a period of unspecified economic growth and this will result in nothing less than an ecological reconstruction of modern society’s institutional organization” (Mol and Spaargaren, 1993: 437). Elements in this switchover include the development and use of cleaner, more efficient technologies, the use of anticipatory (and participatory) planning practices (the precautionary principle), the internalization of externalities, greening of the marketplace and consumption, a broad revolutionizing of popular (environmental) participation in every aspect of social life, and strict government regulations (Cohen, 1997: 109). Examples of ecological modernization in the United States can be found in *Natural Capitalism*, by Paul Hawken, Amory Lovins, Hunter Lovins (<http://www.natcap.org>), as well as McDonough and Braungart’s *Cradle-to-Cradle* (http://www.mcdonough.com/cradle_to_cradle.htm).

In line with the theory of ecological modernization, Elkington (1998) identifies seven revolutions that he thinks are making businesses think differently about sustainability:

The *first* revolution is in markets, where Elkington believes “business will shift from using competition as an excuse not to address the triple bottom line agenda to a new approach, using the triple bottom line as part of the business case for action and investment”(1998: 4-5).

A *second* revolution is said to be taking place in values (i.e., a worldwide shift in human and societal values towards sustainability). Elkington such shifts in values are among the most powerful influences faced by politicians and business leaders alike (5-7).

A *third* revolution, increasing scrutiny worldwide, is forcing organizations to respond to environmental and social concerns (Elkington, 1998: 8). These pressures include:

- compliance;
- punitive fines and costs;
- personal culpability and imprisonment;
- environmental activist organizations;
- other coalitions;
- international codes for environmental performance;
- environmentally conscious investors;
- consumer preference;
- global markets;
- global politics and international organizations;
- competition;
- attracting good workforce (Kinlaw, 1993: 24-26)

Like the compelling examples provided in *Natural Capitalism* or Interface's recyclable carpet tiles, Elkington says that the *fourth* revolution is that companies are increasingly focusing on "life-cycle technology".

Increased partnerships between corporations, government and non-governmental organizations, and thinking in terms of longer time horizons are the basis for the *fifth* and *sixth* revolutions (1998: 11-12).

Finally, the *seventh* revolution that Elkington sees is improved corporate governance: "the better the system of corporate governance, the greater the chance that we can build towards genuinely sustainable capitalism" (1998: 12).

Willard writes that the "trick" to turning these revolutions into action "is to focus on the "selfish" bottom-line benefits, not the seemingly altruistic society and environmental results" (2002: 12). But, there are, in fact, a variety of reasons that firms might behave in this way. Some embrace environmental concerns and stewardship as a basic principle (e.g., Ben & Jerry's Ice Cream, Seventh Generation paper products, Interface). Some adjust along with or ahead of changing environmental and technological conditions (e.g., British Petroleum, 3M, the Pew Business Environmental Leadership Council). Others profit from new paradigms and rethinking business practices (see the cases cited in Hawken et al. 1999). Some organizations respond to changing government, professional and movement-induced standards (e.g., ISO standards, the U.S. Green Building Council's LEED rating system, the certified production of wood products), and others respond to market pressures and opportunities (e.g., pollution trading, demand for renewable power). Case studies reported in *Changing Course* (1992), also indicate that senior management commitment to sustainable development is essential in setting priorities for the company. A similar commitment must be made at each facility owned by the company and each employee must be involved in the accomplishment of environmen-

tal goals (Schmidheiny, 1992: 192).

The start of a more thorough list of reasons for why a business might embrace triple bottom line thinking include:

1. Anticipating the inevitable (changes in business climate, regulation, etc., resulting from environmental harm, new legislation/regulation, changing global standards of performance/best practices, ISO certification, etc.) helps corporations get ahead of the competition (Kinlaw, 1993; Elkington, 1998; Nitkin and Brooks, 1998; Willard, 2002).
2. Better “reputation management” is believed to lead to easier hiring of the best talent and higher retention of top talent (Willard, 2002). Better employee morale, in turn, is said to lead to:
 3. Increased employee productivity, improved productivity, and worker creativity (World Conservation Union, 1991; Willard, 2002). Employee productivity, morale, and creativity also improve when the indoor environment they work in is healthy and comfortable (e.g., improved indoor air quality, daylighting). Green buildings themselves typically sell or lease faster than conventional developments (Hawken et al., 1999).
 4. Reducing compliance (e.g. fines), litigation, and cleanup costs (Kinlaw, 1993: 5). Reduced liability insurance and costs, as well as maintaining eligibility for less expensive insurance (World Conservation Union, 1991). Reducing risks of product liability; reducing risks of major environmental disasters; lower employee, public, and environmental risks and expenses, both present and future, and a better reputation leads to easier financing and greater credibility with banks and other financial institutions (World Conservation Union, 1991; Kinlaw, 1993; Nitkin and Brooks, 1998; Willard, 2002).
 5. Reduced expenses in manufacturing and at commercial sites (Willard, 2002). Reducing the amounts of materials used (Kinlaw, 1993) leads to lower costs of raw materials (World Conservation Union, 1991). Replace nationally and internationally produced items with products created locally and regionally. (Hawken, 1993: 144) can cut transportation costs. And stronger locally/regionally based supply chains and trade ally relationships create greater predictability, greater resiliency (less threat of disruption), and increased network efficiencies.
 6. Reducing (and recapturing) energy expenditures (World Conservation Union, 1991). Creating earnings from energy peak demand reduction contracts and/or local electricity/heat generation (i.e., selling energy saved to third party customers or back into the grid).
 7. Making money from prevention (design, consulting, green architecture, etc.) as well as making money from cutting-edge environmentally-relevant research and development.
 8. Reducing the costs of waste handling and disposal costs; turning wastes into outputs (i.e., capturing value now discarded) (World Conservation Union, 1991; Kinlaw, 1993; Nitkin and Brooks, 1998; Hawken et al., 1999).

9. Making money from clean-up (e.g., environmental mitigation, restoration, and research and development on new environmental technologies).
10. Maintaining market shares with old customers who want more environmentally friendly products as well as creating new distribution opportunities to new customers who are more environmentally sensitive.
11. Building new centers of technical expertise in the firm and network (e.g., expertise in green building, waste reduction, etc.) that can turn into new profit centers (e.g., providing consulting/design and/or outsourced services to other firms).
12. Ability to diffuse learning and efficiencies (via energy savings, waste reduction, new supply chain connections, process innovations, etc.) within the firm.
13. Synergies that develop, with new products, production processes, trade alliances, supply chain expansion, etc., once a critical mass of “sustainable” business activities are underway and linked with one another.

Criticisms of the Triple Bottom Line

The literature on the triple bottom line is sparse in comparison to sustainable development. As one indication, a Google search for “sustainable development” yielded 17,200,000 hits, while a search for “triple bottom line” generated 463,000 hits, or 2.7% of the hits received by sustainable development. Significantly, John Elkington’s company is called SustainAbility (<http://www.sustainability.com>). In one interview, Elkington even says, in reference to the Global Reporting Initiative, “To be honest, I don’t terribly like standards; I don’t like that whole game” (<http://www.johnelkington.com/downloads/twentyyearsafter.pdf>).

The main criticism of the triple bottom line is that “it is difficult to find anything that looks like a careful definition of the concept, let alone a methodology or formula (analogous to the calculations on a corporate income statement) for calculating” the social and environmental bottom lines (Norman and MacDonald, 2004: 245). Norman and MacDonald say “Probably the most curious fact about the 3BL movement—certainly the one that surprised us most as we researched it—is that none of the advocates of so-called 3BL accounting ever actually proposes, presents or even sketches a methodology of the sort implied” by the idea that we can arrive at an aggregated triple bottom line (2004: 248). They conclude that the concept of the triple bottom line is nothing more than “Good old-fashioned Single Bottom Line plus Vague Commitments to Social and Environmental Concerns” (2004: 254).

The literature analyzing triple bottom line pronouncements generally supports this conclusion, although results are mixed since there is no agreed upon triple bottom line accounting system, triple bottom line indicators are frequently called sustainability indicators, and most triple bottom line documents look like corporate social responsibility reports. For example, comparing 652 U.S. manufacturing firms between 1987-1996, King and Lenox (2001) found evidence “of a real association between lower pollution and higher financial performance. We also show that a firm’s environmental

performance relative to its industry is associated with higher financial performance” (2001: 106). A review of the experience of 174 of Canada’s largest 1500 public and private sector corporations that have begun to incorporate sustainable development management and reporting found that:

“Sustainable auditing is neither mandated nor common practice in Canada. There are a relatively large number of environmental progress reports in Canada. Some are very promising in terms of stakeholder inclusiveness and attempts to deal with sustainable development issues. There is little standardization of such reports and little independent opportunity to correlate external reports with what is audited internally” (Nitkin and Brooks, 1998: 1506).

An analysis of 84 assessments of special events (e.g., the Olympics) found that “Notwithstanding the numerous calls for a broader evaluation framework, there have been few attempts to make the conceptual link between the evaluation of special events and the concept of the TBL” (Sherwood et al.). This analysis found that “the predominate method of evaluating events was from an economic standpoint” and the overall tendency was to “include social costs as a counterbalance to the mostly positive economic impacts rather than as an integration of impacts.”

Governments and municipalities around the world have also adopted the triple bottom line as a reporting mechanism, but it is unclear what the end result has been. For example, the Australian Government’s Department of Family and Community Services made a commitment to the triple bottom line in 2002 (<http://www.facs.gov.au/triplebottomline/2004/index.htm>). Using Global Reporting Initiative guidelines, the Department developed indicators and produced reports for 2002–03 and 2003-04 (http://www.facs.gov.au/triplebottomline/2004/lib/doc/facs_tbl.pdf). No further updates have subsequently been provided.

In 2006 the City of Calgary has also adopted a triple bottom line policy framework, this time using the “Melbourne Principles for Sustainable Cities”, and arrived at a different set of indicators of relevance. Based on Calgary’s website, however, it is not clear what the city has done with its policy framework over the past two years.
(<http://content.calgary.ca/CCA/City+Hall/Business+Units/Environmental+Management/Strategic+Environmental+Initiatives/Triple+Bottom+Line/Triple+Bottom+Line.htm>)
(http://www.calgary.ca/docgallery/bu/environmental_management/tbl_policy_framework.pdf)

The International Council on Local Environmental Initiatives (ICLEI) is in the process of developing another indicator scheme for launch in 2008. The STAR Community Index will rate the sustainability of communities in a similar manner to the U.S. Green Building Council’s LEED program.
<http://www.iclei-usa.org/programs/sustainability/star-community-index>

The appendix provides more examples of indicator schemes, but the bottom line is that there is no mutually agreed upon set of indicators for measuring the triple bottom line or sustainable development. It varies from project to project.



In contrast to sustainable development, the triple bottom line is a metaphor without a theory or explicit methodology. Although the terms are frequently used synonymously, they have different origins and bodies of knowledge to illuminate their meaning. Sustainable development refers to an interactive social-ecological process and a way to avoid crossing critical thresholds, namely by promoting social and environmental justice, practicing stewardship of built and natural environments, and greening the economy. The triple bottom is a metaphor that is meant to serve as an accountability tool. A semantic transition from sustainable development to triple bottom line is not advised, especially since the preponderance of theory and research is on the side of sustainable development.

Sustainable Tourism

“Sustainable tourism has become the dominant organisational paradigm of the global tourism industry” (Bianchi, 2004: 498). Barke and Towner write that:

“A broad consensus within the literature would suggest that a process of sustainable tourism development would be based on the substantial re-use of existing manmade and natural resources and would be associated with a low input of energy. It would also be viewed as a process founded in local cultures, producing an equitable distribution of services, managed and administered according to democratic principles, and maintaining and regenerating traditional social values and practices” (2003: 166).

However, research from Spain, the Canary Islands, Barbados, Indonesia, Costa Rica, and the Netherlands reveals that progress towards more sustainable forms of tourism activity is superficial at best (Barke and Towner, 2003; Bianchi, 2004; Butcher, 2006; Cole, 2006; Cottrell et al., 2004; Farrell and Twining-Ward, 2004; Liu, 2003; Mycoo, 2006; Schianetz et al., 2007; Stem et al., 2003; van der Duim, 2004; Vera Rebollo and Ivars Baidal, 2003).

While benefits such as an increase in the average per-capita income, the expansion of employment opportunities, and the socio-economic advancement of women have been seen in some locations (Bianchi, 2004: 499), a partial list of negative indicators includes: environmental degradation (e.g., the death of coral reefs), air, water and land pollution, increased energy and water consumption, increased sprawl, economic exploitation of local populations, dislocation, policy failure or non-existent policy, low wages, job insecurity, high housing costs, and poor levels of public infrastructure provision.

Sustainable development is being undermined in tourism locations because of a continuing commitment to growth oriented strategies and the treadmill of production. Bianchi argues that “the legacy of uneven development, and the entrenched power of regional economic and political elites, is likely to undermine the prospects for a just model of sustainable tourism, and to consolidate the continuing privatisation of space and socio-spatial inequalities across the region” (2004: 495).

The measurement of sustainable tourism is plagued with the same issues that surround the triple bottom line. In a detailed methodological review, Schianetz et al., (2007) argue that “no single tool addresses all of the environmental, social and economic issues at all levels and therefore a combination of different assessment tools may be required to answer specific questions pertinent to a project”

(380). Beratan et al. add that “it is not possible to develop an “ideal” set of indicators....One important objective of an indicator program therefore should be to create and strengthen communicative links among agencies, organizations and individuals with overlapping interests and responsibilities” (2004: 185).

Schianetz et al. identify seven tools for measuring sustainable tourism activities: Sustainability Indicators, Environmental Impact Assessment, Life Cycle Assessment, Environmental Audits, Ecological Footprints, Multi-Criteria Analysis and Adaptive Environmental Assessment.

- ▶ **Sustainability Indicators:** SI is the most broadly used and advocated tool to assess the sustainability of tourism destination, mainly because it is comparatively clear and simple to use at the many levels of a tourism destination (2007: 375).
- ▶ **Environmental Impact Assessment:** EIA's are mainly used as a pre-project approval decisionmaking tool (e.g., for getting a permit. Schianetz et al. cite a study that found that between 1979 and 1993 a total of 175 tourism developments in Australia were subject to EIA. However, the study found that the scientific quality of the conducted assessments was generally low and that the impact predictions were vague and unquantified. (2007: 377).
- ▶ **Life cycle assessment (LCA):** LCA's are relatively complex, especially compared to SI, because it strives to include all possible input and output data over the whole life cycle of a product system. Schianetz et al. say that LCA's have rarely been conducted for sustainable tourism projects (2007: 377).
- ▶ **Environmental auditing (EA):** EA examines the operations on a site (e.g., energy use) and, if necessary, identifies areas for improvement to management. The effectiveness of EA depends on the professional competence of the auditing team, the availability of data, and the follow through of management staff. EA generally takes place at facilities such as hotels or tourism companies (2007: 378).
- ▶ **Ecological footprint (EF):** As defined by Wackernagel and Rees (1996: 6), the EF is an ‘estimate of resource consumption and waste assimilation requirements for a defined human population or economy in terms of a corresponding productive land area’. The EF allows for relatively easy comparisons of environmental performance, but does not measure social issues.
- ▶ **Multi-criteria analysis (MCA):** MCA has mostly been applied to environmental planning and project appraisal and to address conflicting objectives between stakeholders over the use of scarce natural resources MCA techniques allow comparison of alternatives, such as different design options or policy interventions, using a set of criteria and a method for ranking the alternatives. In principle, MCA goes beyond SI as it provides a method of evaluating data and indicators by using different procedures of data standardisation, ranking and weighting, but MCA depends highly on the expertise of the assessment team (2007: 379).
- ▶ **Adaptive environmental assessment (AEA) / mediated modeling:** AEA uses small collaborative workshops of scientists, decisionmakers and computer modelling experts to construct a

simulation model of the economic, social and/or environmental system likely to be affected by a development. Periodic workshops and the refinement of the model with newly available data initiates a learning cycle that promotes systems understanding and facilitates the exploration of management scenarios. AEA has only been applied to the assessment of large-scale developments a few times (2007: 380). An AEA/ mediated modeling process took place in Vermont for energy planning (<http://publicservice.vermont.gov/planning/mediatedmodeling.html>) and the results were fairly mixed since it is a very technical assessment.

The Green Globe 21 program (<http://www.ec3global.com>) also exists as a certification body for sustainable tourism operators, companies, and communities. The Green Globe 21 website indicates that the program specifically addresses:

- Reduction in green house gas emissions;
- Energy efficiency, conservation and management;
- Reduction in the consumption of fresh water and resources;
- Ecosystem conservation and management;
- Support for local community development;
- Improved management of social and cultural issues;
- Improved land use planning and management;
- Improved air quality and noise reduction;
- Improved waste water management;
- Waste minimisation, reuse and recycling;

As a practical matter, Regional Technology Strategies will likely rely on sustainability indicators to evaluate the Appalachian Regional Commission’s programs. Barke and Towner suggest that the following indicators might be appropriate for evaluating sustainable tourism projects:

Sustainability Indicators Checklist

| Indicator | Sustainability Characteristics |
|------------------------|---|
| Energy | Maximize energy efficiency |
| | Generate energy from renewable resources |
| Waste | Reduce waste |
| | Encourage re-use and / or repair |
| | Encourage recycling |
| Transport | Discourage use of cars |
| | Encourage walking or cycling |
| | Encourage use of public transport |
| Pollution | Reduce or minimize local pollution - noise, air, water and land |
| Buildings and Land Use | Conserve and / or re-use older buildings |
| | Provide local amenities |
| | Improve access for disabled |

| Indicator | Sustainability Characteristics |
|--------------------------|--|
| Wildlife and Open Spaces | Encourage natural plant and animal life |
| | Encourage use of open space for community benefit |
| Economy and Work | Increase local employment |
| | Link local production with local consumption |
| | Improve environmental awareness of local businesses and other key actors |
| Local Community | Involve local community in developments |
| | Encourage local action and decision making |
| | Recognize under-represented groups |

(Barke and Towner: 2003: 168)

Vera Rebollo and Ivars Baidal use the well-know Pressure-State-Response framework to arrive at a different set of indicators:

Land Use-Tourism Model

| Indicator | Parameters |
|---|-------------------------------------|
| <i>Tourist / Resource Attractions</i> | |
| Basic tourist resources | Average temperature |
| | Length of coastline |
| | National parks |
| | Golf courses |
| | Berths in marinas |
| | Events of interest |
| Potential tourist resources | Better use of National parks |
| | Remodeling of port |
| | Health-oriented tourism (mud-baths) |
| <i>Land Use</i> | |
| Land for residential use | Square miles |
| Suburban sprawl versus concentrated areas for residential areas | Comparison of surface areas |
| Physical modifications of the coast | Classification of coastal land uses |
| <i>Economic Activity</i> | |
| Economic specialization | Breakdown of sectors |
| Employment by sector | Employment by sector |
| Official unemployment level | Number of unemployed people |
| <i>Demographic Structure</i> | |
| Increase in population | Population levels |

| Indicator | Parameters |
|--|---|
| Origins of the resident population | Population breakdown |
| The ageing of the population | Age breakdown |
| <i>Tourist-oriented Structure</i> | |
| Regulated accommodation offer | Number of beds per hotel, apartment, etc. |
| Potential tourist accommodation available in private homes | Estimation of beds in second homes and apartments |
| Profile of demand | Type of visitor |

(Vera Rebollo and Ivars Baidal, 2003: 190-191).

Pressure Indicators

| Indicator | Parameters |
|--|--|
| Human pressure | Population of municipality during peak period |
| Seasonal human pressure | Urban garbage collection and water consumption during summer |
| Increase in land use for residential purposes | Area of open space |
| Increase in number of dwellings | Average annual increase in dwellings |
| Increase in official supply of tourist accommodation | Average annual increase in tourist accommodations |
| Increase in urban garbage collection | Average annual increase in urban garbage collection |
| Increase in water consumption | Average annual increase in water consumption |
| Increase in consumption of electricity | Average annual increase in electricity consumption |

(Vera Rebollo and Ivars Baidal, 2003: 194).

State-quality Indicators

| Indicator | Parameters |
|------------------------------|---|
| Basic environmental measures | Air pollution, noise pollution, water quality |
| Perceived quality of life | Survey of residents |
| Tourist satisfaction | Survey of tourists |

(Vera Rebollo and Ivars Baidal, 2003: 195).

| Indicator | Parameters |
|------------------------------|--|
| Actions on tourism resources | Urban remodelling |
| Urban planning | Regulation of Urban Plan |
| Protected non-urbanized land | Acreage under protection |
| Tourism planning | Publication of tourism planning document |
| Municipal budget | Municipal budget |

| Indicator | Parameters |
|--|--|
| Green budget | Percentage of budget devoted to garbage collection, gardens, street clean-up, beaches, pools |
| Waste water treatment | Volume of water treated |
| Selective garbage collection | Recycling |
| Environmental surveillance and control | Presence of environmental ordinances |

(Vera Rebollo and Ivars Baidal, 2003: 197).

Issues with Indicators

Cobb writes that “The history of social measurement suggests that indicators have seldom been put to use when they are developed. Only occasionally has this form of knowledge led to action. The relevant issue, then, is the precise conditions under which indicators are most likely to be influential in shaping collective behavior” (2000: 15). Before “sustainability” can be implemented, those involved in the effort need to come to agreement on what is to be sustained, over what time period, and for whom. Answering these difficult questions requires broad public participation in crafting a widely acceptable vision of the future (Beratan et al., 2004: 180). The “Bellagio Principles” (www.iisd.ca/measure/bellagio1.htm, see also Meadows, 1998) provide a widely used set of ten guidelines for assessing progress toward sustainable development.

The first principle states that *a clear vision* of sustainable development and goals that define that vision need to be articulated in order to assess progress. This could be done, Meadows suggests (drawing on work done by *Redefining Progress*), by selecting a small working group responsible for the success of the project that would then “clarify the purpose of the indicator set” (e.g.,) and “identify the community’s shared values and vision” (1998: 26).

The second principle encourages the promotion of a *“holistic perspective”* that stresses the fact that nature and community need to be sustained, while the economy and society need to be developed (primarily to meet the needs of the world’s poor). Both desired states can theoretically be achieved by promoting such *“essential elements”* (Bellagio principle three) as equity/opportunity, limits/resilience, stewardship, qualitative development as opposed to growth, and social systems based on radical resource productivity, biomimicry, a service and flow economy, and increased investment in natural capital. Although the treadmill of production stands in the way of sustainable development, the Ford Foundation proposal can act as an enabling condition fostering progress towards sustainability in impoverished regions, and indicators of sustainability development can act as “leverage points” that influence the desired outcome (Meadows, 1998: 5).

Principles four and five—*maintaining an adequate temporal and spatial scope* and a *practical focus*—are meant to provide clear signals of progress toward sustainability. The selected working group could review existing schemes, indicators and sources of data and draft a set of proposed indicators (Meadows, 1998: 26). Unfortunately, the Board on Sustainable Development of the National Academy of Sciences finds that “there is no consensus on the appropriateness of the current set of indicators or the scientific basis for choosing among them...[Past research] has yet to produce a set of goals for social and natural conditions that can plausibly lead to prosperity for all while conserving

the life support systems on which human economies rest” (1999: 243). Given the difficulty of selecting indicators Meadows recommends the “ten indicators or be shot at dawn” exercise to force people to come to an agreement.

Principles six through ten—*Openness, effective communication, broad participation, ongoing assessment*, and *creating an institutional capacity for data collection, maintenance, documentation, evaluation*, etc. —revolve around establishing a continuing capacity for assessment. Crucial to this process is presenting the draft indicators to a broad range of community participants for their input (Meadows, 1998: 27). The International Standards Organization (ISO) 14000 family of international environmental standards provide guidance on a number of issues- including helping to choose indicators to evaluate an organization’s environmental performance (see www.iso.org). And the Global Reporting Initiative (GRI) has come out with a detailed set of reporting principles and indicators meant to help organizations document and present their economic, social, and environmental performance (see www.globalreporting.org). The 11 reporting principles identified in GRI’s guidelines—transparency, inclusiveness, completeness, accuracy, clarity, relevance, neutrality, timeliness, comparability, and the sustainability context—allow for comparisons to be made over time and across organizations (GRI, 2002: 22).

In another piece, Cobb and Rixford (1998) identify twelve lessons that they believe can help avoid mistakes that previous efforts have made:

- 1) Having a number does not necessarily mean that you have a good indicator;
- 2) Effective indicators require a clear conceptual basis (i.e., time needs to be spent clarifying exactly what is to be measured);
- 3) There’s no such thing as a value-free indicator (cf., Meadows, 1998);
- 4) Comprehensiveness may be the enemy of effectiveness (e.g., Oregon Benchmark’s “superabundance of indicators”);
- 5) The symbolic value of an indicator may outweigh its value as a literal measure (e.g., GDP);
- 6) Don’t conflate indicators with reality;
- 7) A democratic indicators program requires more than good public participation processes (i.e., “an insistence on achieving a consensus of stakeholders or citizens usually produces a set of indicators that do little to challenge prevailing practices”);
- 8) Measurement does not necessarily induce appropriate action;
- 9) Better information may lead to better decisions and improved outcomes, but not as easily as it might seem;
- 10) Challenging prevailing wisdom about what causes a problem is often the first step to fixing it (cf., Meadows, 1999, regarding leverage points);
- 11) To take action, look for indicators that reveal causes, not symptoms; and
- 12) You are more likely to move from indicators to outcomes if you have control over resources (1998: 14-29).

Corporate Evaluation

Kinlaw suggest eight milestones for sustainable performance that program evaluators could presumably monitor to ensure that corporations were taking positive steps:

- 1) sustainable performance policy statement is published;
- 2) sustainable performance baselines are established;
- 3) initial sustainable performance training is accomplished;
- 4) initial improvement projects are underway;
- 5) development of environmental technologies are being supported;
- 6) auditing and reporting system is functioning;
- 7) coalitions with NGOs, government, etc., exist;
- 8) management and human resource systems are revised to support sustainable performance (1993: 23-24).

Community Evaluation

Hart (1999) provides another method for determining the suitability of sustainability indicators. She created a 14-point checklist through which interested parties can assess how well an indicator addresses all facets of sustainable development. A “Yes” answer to any of the questions listed below counts as one point. Hart suggests that “In general, an indicator with a score of less than 4 will not be very useful for measuring sustainability...An indicator with a score of 7 or higher is, in general, a good indicator of sustainability” (1999: 140).

Sustainable Community Indicator Checklist

1. Does the indicator address the carrying capacity of the community’s natural resources, both renewable and nonrenewable, whether local or from distant sources?
2. Does the indicator address the carry capacity of the ecosystem services upon which the community relies, whether local, global, or from distant sources?
3. Does the indicator address the carrying capacity of the aesthetic qualities—the beauty of nature—that are important to the community?
4. Does the indicator address the carrying capacity of the community’s human capital—the skills, education, health and natural abilities of the people in the community?
5. Does the indicator address the carrying capacity of the community’s social capital—the connections between people in a community: the relationships of families, friends, neighborhoods, social groups, businesses, governments and their ability to cooperate and work together?
6. Does the indicator address the carrying capacity of the community’s built capital—the ability to maintain and enhance the community’s infrastructure, buildings, parks, playgrounds, and support systems—with existing resources?
7. Can the community at large understand and use the indicator?
8. Does the indicator provide a long-term view of the community?

9. Does the indicator measure diversity—economic, social or biological?
10. Does the indicator measure equity—intergenerational or intragenerational?
11. Does the indicator measure a link between economy and environment?
12. Does the indicator measure a link between environment and society?
13. Does the indicator measure a link between society and economy?
14. Does the indicator focus on local sustainability at the expense of global sustainability? If the answer to this last question is “yes,” then the indicator is automatically disqualified (Hart, 1999: 35).

Finally, the *Melbourne Principles for Sustainable Cities* are the only internationally ratified set of sustainability principles for cities. They were developed in 2002 through an international charette process involving over 40 municipal and civic representatives from around the world. The process was carried out under the auspices of the United Nations Environment Program. Calgary used the Melbourne Principles to develop their triple bottom line policy framework (<http://content.calgary.ca/CCA/City+Hall/Business+Units/Environmental+Management/Strategic+Environmental+Initiatives/Triple+Bottom+Line/Melbourne+Principles.htm>)

Melbourne Principles for Sustainable Cities

| | Yes | No | If no, why? | If yes, how is it further related to operational plans? |
|---|-----|----|-------------|---|
| Principle 1: Provide a long-term vision for cities based on sustainability; intergenerational, social, economic and political equity; and their individuality. | | | | |
| Does it have / align with a long-term vision? | | | | |
| Does it define long term? | | | | |
| Does it have a definition of sustainability? | | | | |
| Are there means to review vision? | | | | |
| Are there means to monitor how the plan progresses to the vision? | | | | |
| Principle 2: Achieve long-term economic and social security. | | | | |
| Does it consider social, economic and environmental impacts in a transparent way? | | | | |
| Are the benefits of the plan shared with the community in a just and equitable manner? | | | | |

| | Yes | No | If no, why? | If yes, how is it further related to operational plans? |
|---|-----|----|-------------|---|
| Are the negative effects of the plan shared with the community shared in a just and equitable manner? | | | | |
| Are the economic, social and environmental strategies consistent with your long-term vision? | | | | |
| Principle 3: Recognise the intrinsic value of biodiversity and natural ecosystems, and protect and restore them. | | | | |
| Does it protect the intrinsic value of ecosystems? | | | | |
| Are there means to monitor / measure the effect of the plan on biodiversity? | | | | |
| Principle 4: Enable communities to minimise their ecological footprint. | | | | |
| Does this transparently account for your impacts outside your boundaries? | | | | |
| Are there means to communicate the impact of your actions to the community? | | | | |
| Are there means to monitor / measure (e.g., with indicators) the impact of your actions with the community? | | | | |
| Will the plan proceed in the absence of scientific evidence about the extent of your impacts? | | | | |
| Principle 5: Build on the characteristics of ecosystems in the development and nurturing of healthy and sustainable cities. | | | | |
| Are there elements of the project that have been modelled on ecological principles? | | | | |
| Will the benefits of building upon the characteristics of ecosystem be communicated to the community? | | | | |
| Principle 6: Recognise and build on the distinctive characteristics of cities, including their human and cultural values, history and natural systems. | | | | |
| Does the plan consider / build upon cultural values, history and natural systems? | | | | |
| Is the cultural / historical profile of your community embodied in the plan? | | | | |
| Is the plan compatible with the community's cultural / historical profile? | | | | |
| Principle 7: Empower people and foster participation. | | | | |

| | Yes | No | If no, why? | If yes, how is it further related to operational plans? |
|---|-----|----|-------------|---|
| Has the plan undergone community consultation? | | | | |
| Has community engagement been broad, and included typically marginalised voices? | | | | |
| Has the community's participation influenced the strategy? | | | | |
| Are there means to continue community input throughout monitoring and evaluation of the plan? | | | | |
| Principle 8: Expand and enable cooperative networks to work towards a common sustainable future. | | | | |
| Have cooperative networks been established, facilitated, supported and / or consulted throughout the plan's development? Will these networks be consulted throughout the monitoring and evaluation? | | | | |
| Are networks celebrated and publicised within and outside your boundaries? | | | | |
| Have these networks enabled / facilitated collective action in the community? | | | | |
| Is the knowledge / learning of the networks widely shared? | | | | |
| Principle 9: Promote sustainable production and consumption, through appropriate use of environmentally sound technologies and effective demand management. | | | | |
| Does the plan / strategy promote sustainable consumption? | | | | |
| Have environmentally sound technologies been employed in the design and implementation of the strategy / plan? | | | | |
| Does it consider production / consumption costs along the supply chain? | | | | |
| Are there means to support other business engaging in sustainable production / consumption? | | | | |
| Principle 10: Enable continual improvement, based on accountability, transparency and good governance. | | | | |
| Has decision making in the plan / strategy been undertaken in a transparent way? | | | | |

| | Yes | No | If no, why? | If yes, how is it further related to operational plans? |
|---|------------|-----------|--------------------|--|
| Does the plan contain indicators and targets to monitor continuous improvement? | | | | |
| Is good governance celebrated through the plan? | | | | |
| Does the plan contain reporting mechanisms that are based on accountable information? | | | | |
| Is continuous improvement evident by incremental change or innovative strategies, programs or technologies? | | | | |

Appendix

A simple tally of sustainable development indicators was assembled on an Excel spreadsheet to demonstrate the wide variety of indicators that a selected group of eleven organizations utilize or suggest using. The organizations selected were the United Nations (Identified on the spreadsheet as UN; with international level indicators), the Global Reporting Initiative (GRI; any level- although their indicators seem tailored to corporations), the United States Interagency Working Group on Sustainable Development Indicators (SDI; national level), the Balaton Group (Meadows; any level), Jacksonville Community Council, Inc. (JCCI; city level), Sustainable Seattle (Seattle; city level), Santa Monica, California's Sustainable City Program (S. Monica; city level), the Oregon Progress Board (OPB; state level), the Portland-Multnomah Progress Board (PMPB; city and regional level), the Fraser Basin Council, British Columbia (FBC; region level) and the ecological footprint model (Footprint; any level).

A total of 413 indicators were identified (note that this number is not set in stone to the extent that it is possible for some indicators to be compressed). Although indicators can be categorized in any number of different ways, since I began with the UN's indicators and because I assume that their categories reflect some sort of international consensus, I follow the categories used by the UN (i.e., social, environmental, economic, and institutional indicators). Within each of these four categories several themes became apparent. Among social indicators, themes based on "Equity," "Health," "Education," "Government," what might be called "News or Media," "Employment," "Crime," "Transportation," and what might be called "Quality of Life" emerged. Among environmental indicators, themes based on "Climate Change," "Ozone Layer Depletion," "Air Quality," what might be called "Resources and Capacity," "Land Use Trends," "Agriculture," "Forests," "Coastal Waters and Fisheries," "Water," "Materials," "Energy," "Biodiversity," "Emissions, Effluents, and Wastes," what might be called "Organizational Impacts," "Toxic Waste and Mines," and "Transportation, Planning, and Aesthetics" could be identified. Among economic indicators, themes based on "Economic Performance," "Taxes and Government Spending," "Material Consumption," "Energy Use," "Total Amount of Waste by Type and Destination," what might be called "Organizational Performance," "Families and Income," "Housing," "Transportation," and "Built Capital" emerged. Finally, institutional indicator themes such as "Strategic Implementation of Sustainable Development," "International Cooperation," "Agreements with Indigenous Groups," "Information Access," "Communication infrastructure," "Science and Technology," "Disaster Preparedness and Response," and "Improving Decision Making" were identified. Within themes, indicators based on different units of analyses were identified.

The most frequently mentioned indicators (highlighted in yellow on the spreadsheet under the 'total' column) were: percent living in poverty or under the poverty line (5 mentions); unemployment rate (5); adult secondary education achievement level (7); the percent of the population that voted in general/presidential elections (6); the number of crimes per X population (5); percent of the population volunteering time (5); the number and size of nice places like parks (7); greenhouse gas emissions (8); total water use (6); abundance of key species such as salmon (6); annual energy consumption per capita (5); generation of industrial and municipal solid waste (7); and distance traveled per capita by mode of transport (5).

Meadows notes that indicators of sustainable development boil down to values (i.e., we measure what we care about) and mental models or assumptions that we hold about the world (cf., Cobb and Rixford, 1998; Cobb, 2000). Since our values and mental models differ, it follows that our indicators of sustainable development will likewise vary (1998: 6). Based on the current categorization of indicators on this spreadsheet, an amazing 75% (or 310) of the indicators were mentioned only once by any organization. Consequently, although hundreds of indicators are available, few organizations use the same units of analysis, and comparisons between the organizations selected would be difficult at best.

Hart (1999) provides another method for determining the suitability of sustainability indicators. She created a 14-point checklist through which interested parties can assess how well an indicator addresses all facets of sustainable development. A “Yes” answer to any of the questions listed below counts as one point. Hart suggests that “In general, an indicator with a score of less than 4 will not be very useful for measuring sustainability...An indicator with a score of 7 or higher is, in general, a good indicator of sustainability” (1999: 140). Column R on the Excel spreadsheet provides Hart’s rankings—when possible—for the indicators used by these eleven organizations.

As can be seen on the spreadsheet, only three indicators—emissions of greenhouse gases, generation of solid waste, and total water use—are used by more than five organizations and score more than seven points on Hart’s checklist. From a policy point of view it becomes apparent that indicator selection and use is an imprecise endeavor: on one hand, the conceptual foundation of sustainable development is not well known, on the other hand, each region has different takes on what is considered to be important.

The point of this exercise was to point out the diversity of indicators available (and, consequently, the difficulty of comparing indicators across organizations). Although many organizations focus on similar areas, the units of analyses and the quality of indicators used differ dramatically.

Indicator Sources

UN: Indicators of Sustainable Development: Guidelines and Methodologies. <http://www.un.org/esa/sustdev/indisd/indisd-mg2001.pdf>

GRI: Global Reporting Initiative. <http://www.globalreporting.org>

SDI: The U.S. Interagency Working Group on Sustainable Development Indicators. <http://www.sdi.gov>.

Meadows report to the Balaton Group: The Sustainability Institute, Vermont. <http://sustainer.org>.

JCCI: Jacksonville Community Council, Inc. www.jcci.org.

Seattle: Sustainable Seattle. www.sustainableseattle.org.

S. Monica: Santa Monica's Sustainable City Program.
<http://www.ci.santa-monica.ca.us/environment/policy/indicators.htm>.

OPB: Oregon Progress Board. <http://www.econ.state.or.us/opb/index.htm>.

PMPB: Portland-Multnomah Progress Board.
<http://www.p-m-benchmarks.org/tblcnts.html>.

FBC: the Fraser Basin Council, British Columbia. <http://www.fraserbasin.bc.ca>.

Footprint: the ecological footprint. <http://www.redefiningprogress.org>.

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