Sustainability Indicator Projects: Profiles & Findings

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1. Introduction

The use of indicators is becoming an increasingly common method of assessing the quality of life, health, or sustainability of a community. As will be discussed, the meaning of the word can vary, but generally indicators are signs that evaluate the progress of a defined geographic area. Most comprehensive indicator projects assess a community through three different, but interrelated lenses: environment, economy, and society. Sometimes a project may place a particular emphasis on one of these three categories, which leads the project to be more of an environmental, economic, or quality of life assessment. This report will focus on indicator projects that promoted sustainability or embodied the underlying tenants of sustainability.

This section of the report is designed to enhance PVPC's and the affiliated working-group's understanding of sustainability indicators and their use. It will first discuss the methodology behind our project selection and written analysis. It will then present key findings based on our review of seventeen communities with indicator projects in place. The next section profiles each of the seventeen indicator projects. The report concludes with recommendations that will aid in the network's development of indicators.

2. Methodology

There are many resources available that would facilitate the development of sustainability indicators. Both private consulting firms and national organizations, such as the International Sustainability Indicators Network, offer indicator measures and describe their purpose, but these resources fail to address how they were developed or how they will be used by individual communities. For this reason, the driving question behind our literature review became: what type of process preceded the implementation of indicators in communities that have sustainability indicators? Two websites have each put forth reputable databases of communities that have sustainability indicators in place. We refined a comprehensive list generated from the two databases by focusing only on projects that centered on sustainability through the areas of economy, social equity, and the environment. This report provides profiles on seventeen projects.

We evaluated and created a profile for each project using the following framework:

Process
- Who convened the indicator project?
- Who funded the project?
- Who formulated the indicators?
- What is the purpose or mission of the indicator project?
- Was there public input?

Indicators
- What are the indicators or what are they measuring?

- What are the core objectives or values behind the indicators?

Assessment
- Has there been evaluation or assessment? If so what did it consist of?
- What have the pros and the cons of the project been? What's working, what's not…
- Are their factors that make sustainability-enhancing programs more or less likely to succeed?
- What are the results being used for?
- When is it updated?
- Who is responsible for the indicator project (on-going)?
- Has there been any public campaign since the release of the project?

Most of this information was found within reports that were produced as part of the project or was posted on the project's website. Phone calls to the project sponsors were made to fill in any gaps of knowledge.

A few statements need to be made about the report's written analysis to prevent any confusion.

1. **Community.** The word community is used in a broad sense. A community may be a large geographic region like the Pioneer Valley or it could refer to a particular city. All of the reviewed projects focused on a specific area that by design imply some sense of cohesion or sense of place.

2. **Organization.** The word organization is used in a broad sense. An organization here refers to the project sponsor. An organization could be the local government, a non-profit, or even a public-private partnership. The point is that someone had to sponsor the project. For brevity and clarity, "organization" was used to indicate the sponsoring party.

3. **Word Choice.** The word indicator often meant different things to different organizations. Sometimes the word indicator was nowhere to be found at all. We kept the terminology used by the organization because each project was designed with certain logic. Word choice did matter. Supplementing terminology ran the risk of altering the intentions of the organization. To ensure some level of consistency, a diagram showing the relationship between indicators and its various components was provided for each project.

4. **Full lists of indicators.** Detailed information on the specific indicators or measures used is, for the most part, not included within the body or appendix of this report. The number of indicators or measures often exceeded 50. Inclusion would have made the report too unwieldy. To make this report as accessible, user-friendly, and influential as possible, these materials as well as reports, plans and other related documents will be provided in electronic format.

5. **Three E's.** As previously stated, all of the projects we reviewed grounded the development of their indicators within the areas of ecology, social equity and economy.

In order to be brief we refer to these areas throughout the section of this report as the 3 E's.

3. Reviewed Projects

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4. Key Findings from Research

The indicator research report profiles seventeen indicator projects from across the nation by assessing the process used to develop the indicator project, the relationship between the chosen indicators and project goals, and the impact of the project on its geographic area. The following are a list of key findings derived from our research.

1. 9 projects were sponsored by non-profits, 7 by local or regional governments, and 1 by a coalition.

2. Many of the projects (Seattle, Pittsburgh, Minneapolis, Bay Area, Santa Barbara, and San Mateo) started at citizen initiatives and subsequently were adopted by local governments or have been incorporated into non-profits.

3. 10 of the projects were regional in scale while the other 7 were city-level.

4. Most communities had a logical and incremental progression between the beginning of the indicator deliberation process and final selection of indicators. For example: visions→ goal areas→goals→indicators.

5. The final number of participants involved in the planning process was extremely large in many of the projects. The success of the project often depended on two methods of effective management:
   o Breaking the large group into workable, sub-groups with discrete tasks/goals
   o Tapping into the opinions of experts in a way that maximizes their time and input

6. The planning process for many organizations imitated a "funnel effect." The project sponsor initially invited a large amount of stakeholders to participate in order to generate public excitement and public awareness. Following this sweeping invitation, the participation process was controlled and managed with smaller working groups. Cincinnati, Philadelphia, and Pittsburgh all followed this model, initially hosting general public meetings and forums or distributing public surveys and then convening smaller steering committees.

7. All but one of the reviewed organizations had a type of steering committee that spearheaded the project.

8. An effective framework employed by many of the communities consisted of a small working group of "doers" and a larger group of "reactors". The "reactors" would shape information supplied by the "doers". For example, a steering committee ("doers") would develop a list of indicators but prior to finalizing this list, the opinions of focus groups ("reactors") would be elicited to shape and refine the indicators.

9. Community engagement was identified (either explicitly or implicitly) by nearly every community as the central reason behind producing an indicator project. 11 / 17 organizations conducted some form of initial public outreach.

10. Communities like Central Texas and Santa Monica limited their marketing and public outreach to the beginning of the process and the end when the report was finished because they identified these times to be the most important.

11. Martha's Vineyard, Cape Cod, Cincinnati, Minneapolis, Bay Area, Santa Monica, Philadelphia, Pittsburgh, Corvallis all used a consultant in some capacity to assist with their indicator projects. Some of these communities hired the consultant to do the grunt work associated with compiling past research or past projects that had already been completed in the community/region. Other communities employed a consultant to act as a neutral, outside, facilitator.

12. Ten out of the seventeen reviewed projects no longer use indicators. These ten all produced one or several reports, usually with public input, but eventually stopped producing updates. There were several common reasons for this termination. Sponsors found:
   o   Their role had changed and the organization/group adapted to satisfy that new role.
   o   The reports were expensive, and many organizations lacked the resources to continue production.
   o   The project lacked a champion to rally the needed resources to keep up with the updates.
   o   The sizable number of people involved made project collaboration difficult.
   o   The enthusiasm for the project had subdued.

13. The number of indicators a project uses bears a relationship to the amount of resources an organization needs (data collection, volunteers, staff, money) to update its project. Most of the projects had fewer than 50 indicators.

14. Many communities based their final list of indicators on the following criteria:
   •   Accessible, affordable, and consistently available data
   •   Understandable to everyone and easily presented to the media.
   •   Direct relationship to what is being measured
   •   Ability to indicate a trend away from or toward sustainability
   •   Potential to inform actions
   •   Reflects a widely held value

15. Although indicator data was used to identify trends, in many cases this information was not exploited to inform or implement policy.

16. An organization can create project ownership and increase awareness through a contributing membership base. These members can contribute financially or through data-collecting responsibilities.

17. Organizations employed a wide spectrum of methods to report the results from the indicator assessment. Some communities, such as Martha's Vineyard documented indicator findings in an extensive report (several reports clocked in at over 100 pages). On the other side of the spectrum many communities: San Francisco, San Mateo, Santa Barbara, presented findings in a very brief report card format.

18. 13 / 17 projects had websites where one could find information about the project. Some displayed the report's content with separate interactive segments.

19. Report cards can be an effective public relations tool. The 2 communities that utilized report cards strongly believed that the last thing their region or city needed was yet *another* plan. An organization often produced a report and a corresponding report card.

20. A yearly report may not be necessary depending on the project's purpose or the organization's resources. The author of Santa Barbara's report believed a report every couple years would more clearly demonstrate trends. This would draw more attention to the importance of sustainability and avoid public de-sensitization to these important issues.

5. Recommendations

An important and interesting key finding from our research is that *ten out of the seventeen indicator projects no longer use indicators* to measure their area's sustainability. The insights and suggestions of members from these ten projects were especially taken into consideration as the studio team drafted recommendations for the development of an indicator project here in the Pioneer Valley.

These recommendations are organized by the same format as the full indicator project profiles: process, indictors, and results. They should be read within the context of the full indicator report produced by the studio team.

Process

- Establish a logical and incremental progression for the development of the indicator project. Begin the initial public input phase with visionary questions and establish goals and objectives, before progressing to the development of indicators.

- Approach public outreach in a multi-faceted way (i.e. utilize new "wiki" capabilities in addition to invitations to attend public meetings to elicit public contributions).

- Project oversight should fall on a task force or steering committee.

- Manage public input during the development phase with discrete, achievable tasks.

- Strive for a delicate balance between a diversity of perspectives and too many opinions.

- Include city staff and government officials to open up the channels for governmental adoption of the indicators.

- Set-up targeted focus groups to assist with indicator development

- Form a civic panel of local leaders to get critical feedback on the project and to increase the project's sphere of influence.

- Avoid hiring an outside organization to create the indicators. This choice will increase the potential for greater community investment.

- Give the steering committee or a singular working group the responsibility of developing the final set of indicators

- Distribute the indicators for public comment at the end of the development phase

Indicators

- Keep indicator list short if your resources (funding, staff, and time) are limited.

- Indicators should be used to form benchmarks or reflect targets.

- Indicators should reflect the following characteristics:
    - Utilize accessible, affordable and consistently available data
    - Be understandable to everyone and easily presented to the media.
    - Have a direct relationship to what is being measured
    - Indicate a trend away from or toward sustainability
    - Inform actions

Results

- Empower different organizations to sponsor the various chapters, topics, or indicators of the report to distribute the feeling of investment across the community and increase awareness.

- Form commitment contracts with organizations to ensure continual involvement in the advent that key stakeholders change.

- Dedicate funding for public outreach of assessment results.

- Select an outreach coordinator to manage the dissemination of assessment results.

- Lean on volunteers and university researchers to keep expenses low.

- Limit the publication of a report on indicator data to every 2 or 3 years to reinvigorate interest in the project.

- Stimulate public interest through ongoing workshops

- Consider engagement as a fourth "E."

- Produce short report cards to draw the public's and media's attention to important issues as well as to establish accountability.

- Distribute the completed report to key community leaders (city council, business leaders, city staff members, leaders of community organizations).

- Strive for neutrality in the political arena.

- Create an action or management plan that relates to the results of the indicator readings.

- Translate the relationship between the project's goals, objectives and actions into a solid framework used to direct and evaluate city policy.

- Establish financial incentives to help influence change.

- Implement sustainable practices within the day-to-day operations of PVPC and Network activities.

6. Indicators Most Commonly Used

Introduction

One of the integral pieces of reviewing the 17 community indicator projects was developing a list of indicators most commonly used across the communities. Each community had a specific hierarchy of objectives, goals, challenges etc., however, since the core interest involved identifying patterns in the indicators themselves only the indicators were collected and analyzed.

Data Organization

Each community's indicator was grouped into one of three categories: society, environment, or economy. The indicator total amounted to nearly 600 indicators. Additional categories were necessary to organize and present the data in an understandable way. The supplementary categories were formed by identifying emergent trends. For example, indicators such as availability of home loans, homeownership programs, and housing affordability were grouped into a category called housing. Indicators that tracked transit ridership and commuting patterns were grouped under the mobility category. There was no distinction or weighing measures for communities that "contributed" more than one indicator to an emergent category. However, it was noted throughout the list if there was a disproportionate representation of any one community.

The indicators were further refined through the objectives set forth by the Pioneer Valley Sustainability Network. These six objectives are as follows:

1. Maximize Human Health & Safety
Minimize Disease, Maximize Good Nutrition, Adequate Shelter, minimize accidents.

2. Maximize Ecological Health
Biodiversity, Habitats, Eco-Services, Food and Fiber, Water

3. Maximize Cultural Vibrancy
Cultural Preservation, Diversity, Languages, Arts and Creativity, Multi-Cultural Respect, Education

4. Maximize Social Equity (across space and time)
Living Wages and Benefits, Access to Housing, Lack of Poverty, Access to Education, Rights of Future Generations, Environmental Justice, Quality of Life, maximize choices available to least advantaged.

5. Maximize Social Connectivity and Stability
Living Communities, Respect for Place, Fair and responsive Governance, Links to Nature, Secure Property and Wealth, Political Self-Determination, Peace, minimize Crime; minimize risk

6. Maximize Economic Efficiency
Efficient use of Capital, Education, Scientific Progress, Technology; Efficient use of resources (includes minimizing waste)

The objectives established by the Pioneer Valley Sustainability Network are unique to this group. Therefore not all of the sub-themes under each objective were addressed among the 600 indicators. However, in most cases the indicator emergent categories that encompassed the greatest amount of indicators were also addressed in one of the six objectives. Recommendations for suggested indicators were made when this correlation did not exist. Several times categories of indicators were applicable to more than one objective. In these instances, the categories of indicators were listed twice, in order to empower the Network to make a final decision about where the indicators should fall. The number in parentheses which follows each indicator topic represents the number of indicators that fall within that topic.

Objective (1) Maximize Human Health & Safety

Health (Minimize disease)
- o Health Insurance Coverage (7)
- o Infant Health (6)
- o Health Status (6)
- o Asthma (2)

Safety
- o Crime Rates (6)
- o Incidents of abuse (6)
- o Homicide (2)
- o Arrest Rates (2)

Housing (adequate shelter)
- o Housing Affordability (7)
- o Homelessness (4)
- o Housing Supply (2)
- o First-Time Homeownership (1)
- o Homeownership rates (1)
- o Access to Home Loans (1)

Food & Agriculture (*maximize good nutrition)**
- o Availability of local, organic produce (2)
- o Restaurant produce purchases (1)
- o Number of public agricultural gardens (1)
- o Quantity of food & agricultural residuals recycled (1)
- o Number of educational programs about sustainable agriculture and nutrition (1)

*It should be noted that the category of Food & Agriculture was addressed with heavy emphasis by only two communities out of seventeen (Santa Monica and San Francisco).

Objective (2) Maximize Ecological Health

Biodiversity (Biodiversity; habitats)
- o Diversity of species (4*)*
- o Acres of habitat restored (2)

Water (water)
- o Water Quality (12)
- o Water Consumption (9)
- o Water Disposal & Diversion (3)

<u>Suggested Categories:</u>

Air Quality
- o Air Quality (general) (8)
- o Toxic Air contaminants (2)
- o Federal/National Standards (2)

Waste
- o Solid Waste (8)
- o Wastewater (3)
- o Waste Management (3)
- o Conservation & Waste Reduction (3)

Energy
- o Energy Use (8)
- o Renewable energy use (4)

Recycling (efficient use of resources)
- o Participation Rates in recycling programs (5)
- o Ration of recycled material (motor oil, water, waste) to total use (4)

Objective (3) Maximize Cultural Vibrancy

Cultural Resources
- o Students in the Arts (3)
- o Participation in the Arts (3)
- o Attendance/usage at libraries & museums, community centers (2)
- o Performing Arts (Attendance & Number of Shows) (2)

Objective (4) Maximize Social Equity (across space & time)

Income/Standard of Living (Living wages & benefits)
- o Measures of Income (6)
- o Employment & Workforce Wages (5)
- o Income Distribution (4)
- o Cost of Living (3)
- o Poverty (3)

Housing (Access to housing)
- o Housing Supply (2)
- o Housing Affordability (7)
- o Homelessness (4)
- o First-Time Homeownership (1)
- o Homeownership rates (1)

  o Access to Home Loans (1)

Education (Access to education)
  o Academic Performance (test scores) (7)
  o Graduation rate (5)
  o Higher Education or technical training (2)
  o Quality of schools (2)
  o Internet Access (2)

Environmental Justice*
  o Mean income level of people in historically disadvantaged communities
  o Portion of environmental pollution sources in historically disadvantaged communities
  o Participation of historically disadvantaged communities

* It should be noted that the category of Environmental Justice was addressed with heavy emphasis by only one community out of seventeen (San Francisco).

Services (maximize choices to the least advantaged)
  o Child Care (access & quality) (3)
  o Elementary School Lunch Participation (1)
  o Temporary Assistance to Needy Families (TANF) (1)
  o Food Bank Usage (1)
  o Public Library Use (1)

<u>Suggested Categories</u>

Transportation/mobility (issue of access to transportation and environmental impact))
  o Commuting (4)
  o Vehicle Miles Traveled (4)
  o Traffic Congestion (4)
  o Bus Ridership (3)
  o Vehicle Ownership (3)
  o Safe transportation opportunities for Pedestrians & Bikers (3)
  o Transportation Efficiency (2)
  o Alternative fueled cars (2)

Objective (5) Maximize Social Connectivity and Stability
*Living Communities, Respect for Place, Fair and responsive Governance, Links to Nature,
Secure Property and Wealth, Political Self-Determination, Peace, minimize Crime; minimize risk*

Land Use (links to nature)
  o Open Space; Green Space (how much public open space, how accessible open space) (11)
  o Parks (accessibility, municipal expenditure) (6)
  o Land consumption (ratio of protected land to developed land) (3)

Inclusion & Participation
  o Volunteering and philanthropic giving (16)
  o Voter participation (10)
  o Diversity of Leadership (education, law enforcement, political representation) (7)
  o Percentage of population that feels treated with fairness and respect in public interactions (1)

  o Minority business owner (1)

Safety (minimize crime)
  o Arrest Rates (2)
  o Crime Rates (6)
  o Incidents of abuse (Domestic, Sexual, Child) (6)
  o Homicide (2)

<u>Suggested Category:</u>

Neighborhoods
  o Neighborliness (2)
  o Neighborhood Investment: Investment in Targeted Low Income Neighborhoods (1)
  o Gentrification/Residential Displacement (1)
  o Number of active, cohesive neighborhoods (1)
  o Number of pedestrians in neighborhoods (1)
  o % of people you feel safe in their neighborhood (1)
  o Number of neighborhood projects and events (1)

Objective (6) Maximize Economic Efficiency
Efficient use of Capital, Education, Scientific Progress, Technology; Efficient use of resources (includes minimizing waste);

Education
  o Academic Performance (test scores) (7)
  o Graduation rate (5)
  o Higher Education or technical training (2)
  o Quality of schools (2)
  o Internet Access (2)

Income/Standard of Living
  o Measures of Income (i.e. median family, personal, household, living wage) (6)
  o Employment & Workforce Wages (5)
  o Cost of Living (3)
  o Poverty (3)
  o Income Distribution (4)

Job Quantity/Quality
  o Job Growth (6)
  o Unemployment Rate (4)
  o Employment concentration (4)
  o Quality Job Creation (1)
  o % of hiring from local job pool (1)
  o % of major employees headquartered in Region (1)

Creative Class
  o Entrepreneurial spirit as measured by new business starts (2)
  o Technology Innovation (2)
  o Venture capital investments (1)

- o Fast growth "gazelle" companies (1)
- o % of workforce between 20 and 35 years of age (1)
- o Federal research and development contracting (1)
- o Patents (1)

<u>Suggested Category</u>

Business Vitality (economic)
Six of the communities had a concentration of indicators encompassed by the emergent category, business vitality. The actual indicator varied from community to community (as you can see from the list below) but the common goal that linked all the indicators was the desire to identify and track the business climate of each area/region. These indicators keep in mind the traditional definition of regional economic growth: its ability to retain and grow existing businesses, generate new businesses, and attract businesses and investment from outside the region.[1] The Pioneer Valley could use many of these indicators in a powerful way, to identify regional economic strengths and weaknesses.

- o Business Satisfaction
- o Office, Industrial, & Retail Space Availability
- o Percentage of Pioneer Valley corporations with headquarters in the Pioneer Valley
- o Percentage of major employees headquartered in Pioneer Valley
- o Duration of local businesses

Plan for Progress
The Pioneer Valley Sustainability Network may consider consulting, the Plan for Progress (http://www.planforprogress.org/). The Plan for Progress was developed in 1994 by the Pioneer Valley Planning Commission in partnership with Western Massachusetts Electric Company and numerous civic and business leaders, and government officials. These parties came together to identify the strengths and weakness of the region in addition to the challenges and opportunities, all of which coalesce to act as a future guide for economic growth. The Plan, which was updated in 2004, contains seven cross-cutting themes of specific regional significance which each includes benchmarks or indicators. The thirteen strategic goals and action steps embodied in the Plan would be valuable touchstones for the Sustainability Network.

Demographic Indicators
Several of the communities reviewed included basic demographic indicators in their final set. These types of indicators are easily collected and can point to important trends that traverse the environmental, economic, and social categories. The 2006 edition of MassBenchmarks, produced by the Donahue Institute revealed that the Pioneer Valley has lost a net of nearly 35,000 people to domestic out-migration. Although this data is already being collected additional value can be derived from combining this demographic data with the other indicators encompassed by the Network's objectives; a window into patterns and trends could be gained from this combination.

Quality of Place/Quality of Life
The indicators that are encompassed by the categories listed above can be viewed together as contributing to a community's Quality of Place. By viewing the indicators within this framework

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[1] Reilly, Catherine; Renski, Henry. Place and Prosperity. Prepared for the Governor's Council on Maine's Quality of Life. 2007.

the Pioneer Valley can further capitalize on what makes the region unique and marketable. In addition, there is a growing category of businesses that make location choices based on the quality of life characteristics that a community has to offer, the Pioneer Valley has the opportunity to discover their niche in this area.

Commonly Used Indicators Reorganized
The following is a list of the commonly used indicators broken down into the three initial categories; and additional supplementary categories (the Network's objectives are not included in this list.

Economy
Income & Standard of Living (22)
Job Quantity & Quality (19)
Creative Class (12)
Business Indicators (11)
Business Vitality (11)
Housing (9)
Health (4)
Education/Training (3)
Tourism (3)
Downtown Economy (3)
Aggregate (3)
Transportation (3)
Tax Revenue (2)
Outside Dependence (2)
Job-Housing Balance (2)
Reinvestment (4)

Equity
Inclusion & Participation (38)
Education (30)
Safety (23)
Housing (17)
Services (11)
Neighborhoods (11)
Cultural Resources (11)

Jobs & Wages (6)
Standard of Living/Income (6)
Transportation (4)
Race Relations (4)
Environmental Justice (3)
Aggregate (1)

Environmental
Mobility (32)
Land Use (30)
Water (27)
Waste (17)
Energy (14)
Air Quality (13)
Development (10)
Biodiversity (9)
Recycling (8)
Hazardous (8)
Food/Agriculture (6)
Education (surrounding environmental issues) (5)
Emissions (5)
Toxins (4)
Aggregate (4)
Health (4)
Ozone (1)

7. Project Profiles as of October 2007

Bay Area Indicators Project
Bay Area Alliance
San Francisco, California
http://www.bayareaalliance.org/index.html
(415) 352-3648

Process
The Bay Area Alliance produced a report measuring the region's sustainability using indicators in 2003. [2] This report was based on the premise that if the Bay Area stays on its current path, it will face some serious challenges in the future. Two individuals spearheaded the formation of the Bay Area Alliance to develop and implement a sustainability action plan for the Bay Area in 1996 and quickly recruited three people to form a five-member steering committee—each of who represented either one of the three E's or government. The Alliance became the current multi-stakeholder coalition—comprised of members from Bay Area businesses, and government, environmental and community development organizations—in 1997.

The organization intended on developing a plan that was to be the first action of an ongoing process to "help the Bay Area's 9 counties and 101 cities become the most sustainable and healthy assemblage of communities in the country." [3] In order to improve the likelihood of obtaining regional consensus on a plan, the Alliance took the following ordered steps, which occurred approximately from 1997-2003: [4]

- Convened 5 working caucuses and 6 working groups made up of more than 200 participants from across the region to.
- Incorporated feedback received during these sessions to form a working draft.
- Provided copies of this draft to staff members of the Bay Area's regional planning agency, Alliance members, and area stakeholders for review in 1999.
- Revised the draft to reflect the received feedback.
- Presented the draft to Bay Area county and city officials for review (especially for implementation feasibility) in 2001.
- Revised the draft to reflect this feedback into the final plan.
- Submitted final plan to member organizations of the Bay Alliance for approval in 2002.
- Published the final plan: *Compact for A Sustainable Bay Area (Compact)* in 2003.

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[2] Profile references: *Bay Area Indicators: Measuring Progress Toward Sustainability* (January 2003, revised May 2004), Bay Area Alliance, San Francisco, CA; *Compact for a Sustainable Bay Area* (November 2003) Bay Area Alliance, San Francisco, CA; Bay Area Alliance website, http://www.bayareaalliance.org/index.html; Allison Quaid, Executive Director, Bay Area Alliance San Francisco, CA; Peter Melhus, Professor (former project member), San Francisco State University, San Francisco, CA; and Ceil Scandone, Senior Regional Planner (former project member), Association of Bay Area Governments, San Francisco, CA .
[3] *Bay Area Indicators*, 7
[4] History of the project development can be found in *Compact*, 22-24

By the end, close to 2,000 people provided input on the Bay Area's sustainability plan. The *Compact* laid out a vision for the region in relation to the three E's of sustainability. The *Compact* identified 10 regional challenges and recommended 10 corresponding strategic commitments to meet each challenge. Overall, 66 of the 101 cities in the region and all 9 counties formally approved the plan.

The Alliance, in partnership with the Northern California Council for the Community (NCCC), also sponsored a companion to the *Compact* on the current state of the Bay Area called: *The Bay Area Indicators*: *Measuring Progress toward Sustainability* (published 2003, revised in 2004). *The Bay Area Indicators (Indicators)* was meant to be the first of many periodic reports that track how well the Bay Area is meeting each of these strategic commitments. These indicators were formulated in strategic working groups during the public campaign for the *Compact* plan.

The Alliance sponsored the *Indicators* report in collaboration with the Northern California Council for the Community, United Way of the Bay Area, and United Way Silicon Valley, and they received funding from several public, private, and non-profit sources. *Indicators*, though, was not drafted by the Alliance's steering committee nor members of one of the working groups. The Alliance hired two outside consulting firms to research, gather data, and draft the final report.

The main purpose of indicator project was to influence area decision makers. For this reason both reports were sent to each city council member in the 101 cities of the Bay Area, all 250 representative members of the Bay Area Council, and top leaders of area non-governmental organizations. The report was also posted on the Alliance's website for public view.

Indicators

The steering committee convened a special indicators working group to develop Bay Area specific indicators. The resulting indicators reflect public commentary from the *Compact* plan development phase and successful indicators in use by other communities nationwide. The indicators working group tried to choose indicators with readily available data and hoped to lean on the research and data of others to conduct periodic assessments.

The 10 strategic commitments that are outlined in the *Compact* are the core objectives/values behind the indicators. The following lists the challenges, commitments to the challenges, and the indicators used to measure how well the area is addressing these challenges (or living up to their commitments).

Challenge 1: Sustainable Economy
Strategic Commitment: "Enable a Diversified, Sustainable, and Competitive Economy to Continue to Prosper and Provide Jobs in Order to Achieve a High Quality of Life for All Bay Area Residents."
Indicators: Gross Regional Product, Genuine Progress Indicator, Income Distribution, Median Family Income, Personal Income, Living Wage Income, Unemployment Rate, Poverty

Challenge 2: Housing
Strategic Commitment: "Accommodate Sufficient Housing Affordable to all Income Levels within the Bay Area to Match Population Increases and Job Generation."

Indicators: Housing Supply, Jobs — Housing Balance, Population Density and Intensity of Land Use, Housing Affordability, Homelessness

Challenge 3: Transportation
Strategic Commitment: "Target Transportation Investment to Achieve a World-Class, Comprehensive, Integrated and Balanced Multi-Modal System that Supports Efficient Land Use and Decreases Dependency on Single Occupancy Vehicle Trips."
Indicators: Commuting, Vehicle Miles Traveled

Challenge 4: Natural Assets
Strategic Commitment: "Preserve and Restore the Region's Natural Assets, Including San Francisco Bay, Farmland, Open Space, Other Habitats, and Air and Water Quality."
Protected Land
Indicators: Brownfields, Water Use Per Capita, Ecological Health of the Bay, Ecological Footprint

Challenge 5: Resource Use
Strategic Commitment: Use Resources Efficiently, Eliminate Pollution, and Significantly Reduce Waste.
Indicators: Energy Use, Carbon Emissions, Ozone, Particulate Matter, and Waste Disposal and Diversion

Challenge 6: Neighborhood Integrity
Strategic Commitment: "Focus Investment to Preserve and Revitalize Neighborhoods."
Indicators: Unemployment Rate, Neighborhood Investment: Investment in Targeted Low Income Neighborhoods, Gentrification/Residential Displacement

Challenge 7: Educational System
Strategic Commitment: "Provide All Residents with the Opportunity for Quality Education and Lifelong Learning to Help them Meet their Highest Aspirations."
Indicators: Educational Performance, Per Pupil Spending

Challenge 8: Community Health and Safety
Strategic Commitment: "Promote Healthy and Safe Communities."
Indicators: Arrest Rates, Health Insurance Coverage

Challenge 9: Local Government Finance
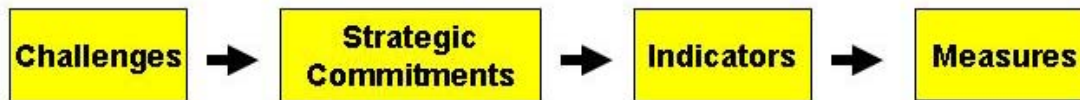*Strategic Commitment*: "Implement Local Government Fiscal Reforms and Revenue Sharing."
Indicators: Tax Revenue, Tax Revenue Sharing

Challenge 10: Civic Engagement
Strategic Commitment: "Stimulate Civic Engagement."
Indicators: Voter Participation, Diversity of Officials

Most of the indicators were simply measured by one thing. A few were measured by three or more. For example, the indicator "Ecological Health of the Bay" was measured by attaining the concentrations of ammonium, PCB's, mercury, and even Asiatic clams! The Methodology section at the end of the report provides exact details on how the indicators were calculated.

Assessment

The *Indicators* report was updated in 2004 with the addition of a "Genuine Progress Indicator" and "Ecological Footprint." Although the project was originally intended to be an ongoing assessment, the Alliance (which is a multi-stakeholder coalition) has not revisited or updated the *Indicators* report and the *Compact* plan. While the process leading up to the production of the *Indicators* report and *Compact* plan certainly stimulated individual or collective action on issues involving sustainability (a goal of the project), the project lost momentum once the documents were published.

The executive director of the Alliance recently provided some insight on why this occurred. Foremost, the list of indicators was too long. The Alliance hoped to lean on public agencies, institutions, and jurisdictions for data collection and analysis to the point where it became an automated and routine function for these outside parties, but the extensive list made this process too cumbersome. A shorter list would have: enabled the public to better understand the significance behind the indicator readings, reflected key issues that truly excited people, and made more of a direct impact on public policy. The executive director suggested the few, chosen indicators be made up of the following:
- o Three indicators that really get the public excited. Perhaps one for each of the three E's.
- o One or two indicators that excite policy and business professionals, particular ones that cause them to think outside of the box.
- o One or two indicators that are composite indicators like an environmental footprint.
- o One indicator that reflects concerns and is more symbolic in nature. This would be developed through surveys or workshops rather than hard data.

The executive director also noted that any organization looking into developing a sustainability plan using indicators or an indicator report should strongly think about what kind of policy the assessment is to affect. In order to be a strong effective project, there needs to be strong objectives. An organization should also be prepared to set aside a large sum for marketing. This will be crucial to affecting policy or stimulating individual interest—the whole point of the plan. To do otherwise will limit the impact of the project's results, making the project, in a way, pointless. An equal amount of time needs to be spent on outreach because the whole point is to influence decision makers. The Alliance recently found their pool of resources to be too small to make the project very effective.

A former steering committee member indicated that the project may have lost momentum because it lost certain key people or "project champions." The member felt strongly that money continually needed to be sought, local government officials and business leaders continually needed to be pressed: project champions are central to a project's ongoing effectiveness.

The Alliance is still committed to sustainability despite the fact that the project did not progress past the 2003 and 2004 publications, and their website provides a forum to learn about current issues and activities. Both the *Indicators* report and *Compact* plan are still readily available on their site. The documents are worthwhile to view as effective examples of public relation tools. Written and formatted in clear and engaging manner, the *Indicators* report presents each indicator and states why it was chosen as an indicator ("Why it's important") and then demonstrates how the area is doing based off its reading ("How We're Doing").

Sustainability Plan

City of San Francisco
San Francisco, California
http://www.sfenvironment.org/index.html
(415) 355-3714

Process

The San Francisco Board of Supervisors approved the *Sustainability Plan* in 1997, which "established sustainable development as a fundamental goal of municipal public policy." [5] The City believed sustainability was not some lofty, theoretical goal and the *Plan* set out to illustrate that it could be "divided into manageable sections, specific strategies can be proposed, and action can begin." To that end, the *Plan* names 15 topics and lists several goals toward achieving sustainability for each topic. The action-oriented component of the plan comes from the series of long-term and short-term objectives as well as identifiable actions to be taken to achieve the objectives. The city decided to use indicators to measure their efforts towards these objectives. The topics, goals, objectives, indicators, and targets all form the *Plan*.

The *Plan* was the result of a long collaborative process dating back to 1993 when the City established a Commission on San Francisco's Environment during that year and "charged them with drafting and implementing a plan for San Francisco's long-term environmental sustainability." The newly formed Commission recognized that the implementation of such a plan would require community buy-in. For that reason, an ad-hoc steering committee of "city agencies, businesses, environmental organizations, elected officials, and concerned individuals" was formed to guide the development of a sustainability plan.

This committee, known as Sustainable San Francisco, enlisted nearly 400 volunteers "from every walk of life" to help draft a plan. A visible product of this collaboration can be found within the structure of the *Plan* itself: different topic sections have a different numbering system. This is because the city Commission assigned each topic to a different working group (which had between 20-30 people). Outreach materials stress how the plan is for and by residents of the city: it is endorsed as local government policy, but it was not drafted by city staff. The Commission, though, did recruit local experts for their advice as a way to advance the production of a draft plan more quickly.

When the committee finished the initial draft, they opened it up for public comment at four different day-long hearings in June of 1996. They also solicited written comments. The plan was completed and approved by City's Board of Supervisors the following summer. The city launched the *Plan* in 1997 with outreach to the local media and to business, community, and

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[5] Profile references: *Sustainability Plan Report Card* (March 2003), City of San Francisco, CA; *Sustainability Plan* (October 1996) City of San Francisco, CA; *Strategic Plan 2007-2009*, City of San Francisco, CA; City of San Francisco Department of the Environment website; Mark Westlund, Public Outreach Manager, City of San Francisco, CA.

civic stakeholder groups about the *Plan's* objectives. This entire initiative received financial support from the City and County of San Francisco and four foundations.

Indicators

The working groups formulated the indicators used in the plan; however, they are modeled after the indicators used in Sustainable Seattle's indicator project. Indicators figure prominently in the action-oriented component of the *Plan* as a means of measuring how well the City is meeting its specified objectives and, more broadly, how the City is progressing towards its goals. The goals and their corresponding long-term objectives, short-term objectives, actions, and indicators all fall within one of the 15 topics named in the *Plan.* The topics and corresponding indicators are:

Economy & Economic Development
- o # of SF enterprises adopting ISO 14000 standards
- o Unemployment Rate
- o # of SF manufacturers using recovered secondary materials as raw material
- o % of people employed in SF who live in SF (City)

Air Quality
- o # of people going to clinic for respiratory problems
- o % of alternatively fueled new cars registered

Biodiversity
- o # of volunteer hours dedicated to supporting biodiversity
- o # S.F. of worst invasive species removed
- o # of indigenous plant species planted
- o Abundance & species diversity of birds

Energy, Climate, Ozone Depletion
- o Ratio of renewable/non-renewable energy consumption
- o Energy Cost per dollar

Food & Agriculture
- o # of public agricultural gardens
- o Quantity of food & agricultural residuals recycled
- o # of educational programs about sustainable agriculture & nutrition

Hazardous Materials
- o Ratio between motor oil purchased/motor oil recycled
- o Distribution of hazardous materials throughout city
- o # of contaminated sites
- o Public awareness of hazardous materials/waste issues

Human Health
- o New cases of asthma
- o # of people attending wellness classes
- o Participation in organized youth programs at city recreation centers

Parks, Open Spaces, Streetscapes
- o % of population w/ a recreational facility & a natural setting w/in a 10-minute walk

o # of green street corridors created annually
o Annual municipal expenditure on parks, open spaces, streetscapes
o # of volunteer hours spent annually on open space

Solid Waste
o Tons of waste landfilled annually
o Recycling rate as a % of material generated
o % of residents, businesses, & institutions that participate in recycling programs

Transportation
o Auto Registration
o Parking-spot inventory
o Municipal ridership
o Municipal route running time on key routes

Water & Wastewater
o Per capita water consumption measured by the San Francisco Water Department
o Mass pollutants in wastewater
o Mass and frequency of combined sewer outflows
o Recycled water use
o Acres of habitat restored

Public Information & Education
o # of schools that integrate & update environmental education in their curricula
o # of volunteers working on environmental projects
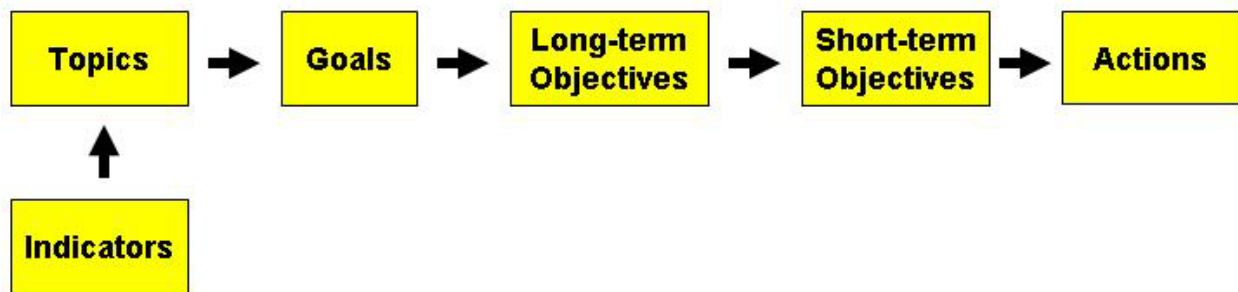o Conservation & waste reduction

Risk Management
o # of businesses training employees in Neighborhood Emergency Response
o Risk Management # of seismically upgraded buildings
o Risk Management # of hazardous materials incidents

Environmental Justice
o Mean income level of people in historically disadvantaged communities
o Portion of environmental pollution sources in historically disadvantaged communities
o Participation of historically disadvantaged communities

Each topic has two to five indicators, amounting to a total of 53. The importance of the indicators as a public relations tool is highlighted by what the city deemed as necessary criteria to be included as an indicator. The indicator needed to:
1. Directly relate to what is being measured (obvious)
2. Be found at a low-cost given the current information gathering capabilities
3. Clearly indicate a trend away from or toward sustainability
4. Be understandable to everyone and easily presented to the media.

Assessment

The *Plan* was intended to guide city staff when drafting environmental legislation and to empower the local community to support the city's sustainable initiatives. A newly created Department of the Environment (1997) was charged with implementing the *Plan*. Staff within this department utilized the organizations and individuals who contributed to developing the *Plan* to drum up support for the city's actions. A website, "Sustainable City" was created to showcase the *Plan*; although, the website now appears to be defunct. The City produced a report card in 2003 to show the public how San Francisco was meeting the *Plan's* five year objectives. The indicators themselves are not apparent in the report card. Instead, the *Report Card* reads like the *Plan*: it lists the objectives and subsequent actions of the *Plan*, only in this document their status (accomplished, in progress, not yet started) is noted. The *Report Card* indicated that the city had met many of its specified objectives.

A recent conversation with a staff member from the city's Department of the Environment indicated that the Plan, along with the indicators, is no longer in used by city staff to guide policy. While the city originally intended the Plan to be ongoing with periodic assessments, the results of the 2003 Report Card changed their course of action. Those objectives that had not been achieved were deemed as unrealistic expectations. Instead of continuing the Plan with its ongoing assessment, the Department of the Environment decided to put its energy into a 3 year Strategic Plan which has been updated every three years. This plan outlines the Department's current programmatic goals, which are: Carbon Neutrality, Energy, Clean Air Transportation, Green Building, Urban Forest, Zero Waste, Toxics Reduction, Environmental Justice, Environmental, Education, and Public Outreach.

Sustainable City Program

City of Santa Monica
Santa Monica, California
http://www.smgov.net/epd/scp/index.htm
(310) 458-2213

Process

In 1994 the City of Santa Monica adopted the "Sustainable City Program," and the City has been using indicators as a means to measure progress toward sustainability since this point, making them a leader in this field.[6] The city's Task Force on the Environment proposed the program in 1992 and received a positive response from the city shortly after. The Task Force then led a series of public workshops and conducted strategic focus groups with key stakeholders to formulate guiding principles and develop goal areas, specific goals, and targets. The purpose of the program was to provide criteria for evaluating the long-term rather than the short-term effects of day-to-day decision making. A particular goal of the program was to influence the decisions of the city's policy makers.

The 1994 Program focused on 4 goal areas: Resource Conservation, Transportation, Pollution Prevention and Public Health Protection, and Community and Economic Development. Each goal area had specific goals with outlined "targets," which were numerical objectives to be reached by 2000. These were decided collaboratively during the series of focus groups. These groups also selected indicators to measure the city's progress toward each of the goals and subsequent targets.

The city produced progress reports in 1994, 1996, and 1999 that tracked how the Program was meeting its goals. These reports demonstrated a positive trend toward target goals. Even so, the city decided to comprehensively update the program, complete with new goal areas and indicators, in 2000 to "provide a more complete picture of community sustainability." They hired a consultant—one of the leading authorities on indicator projects—to help develop an expanded program and spearhead the effort to obtain public input. The consultant, working collaboratively with city staff and a newly formed "Sustainable City Working Group" (a large group of elected and appointed officials, City staff, and representatives of neighborhood organizations, schools, the business community and other community groups), began the update process during the summer of 2001. Over the course of one and one half years, the consultant held public workshops, attended community group meetings, and led strategic focus group sessions with key community stakeholders. The Working Group discussed the findings from these sessions, made changes to the initial goals and indicators and created a new set of goal areas, goals, targets, and indicators. The group set a new target date of 2010. This entire process led to the production of Santa Monica's *Sustainable City Plan* in 2003.

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[6] Profile references: Sustainable City Plan (Oct. 2006), city of Santa Monica, CA; Sustainable City Report Card (Sept. 2006) city of Santa Monica, CA; Sustainable Santa Monica website http://www.smgov.net/epd/scp/index.htm; Shannon Parry, Sustainable City Plan Coordinator, city of Santa Monica, CA.

The city created a Sustainable City Task Force in 2004, comprised of 11 members with expertise in the various areas of sustainability, to carry the Program into the future. Within city hall, an interdepartmental Sustainable City Advisory Team was formed to "coordinate existing City activities so they are consistent with the *Sustainable City Plan* goals and to help facilitate the future implementation of innovative programs and policies." The Advisory Team is headed by a city staff member, the Sustainable City Plan Coordinator. The Coordinator oversees a staff of 3 that assess data and review the Program's benchmarks. Both the Task Force and Advisory Team are "responsible for developing a comprehensive implementation plan for meeting Sustainable City goals and targets, and for coordinating implementation, both interdepartmentally and within community stakeholder groups." The city funds the Program on an ongoing basis, through its enterprise fund.

Indicators

Indicators directly correspond to a descending framework of goal areas, specific goals, and targets (outlined below). The *Plan* starts with 8 goal areas that "comprise the core of the community vision and represent what Santa Monica must achieve in order to become a sustainable city." These goal areas are:

Resource Conservation (8)
- Solid Waste Generation
- Water Use
- Energy Use
- Renewable Energy use
- Greenhouse gas emissions
- Ecological footprint
- Indicator of sustainable procurement
- "Green" construction

Environment & Public Health (12)
- Santa Monica Bay-beach closures
- Wastewater (sewage) generation
- Vehicle miles traveled
- Air quality
- Residential household hazardous waste
- City purchases of hazardous materials
- Toxic air contaminant releases
- Urban runoff reducation
- Fresh, local, organic produce
- Organic produce-farmer's markets
- Restaurant produce purchases
- Food choices

Transportation (10)
- Modal Split
- Residential use of sustainable transportation options
- Sufficiency of transportation options

- Bicycle lanes and paths
- Vehicle ownership
- Bus ridership
- Alternative fueled vehicles-City fleet
- Traffic Congestion
- Pedestrian and bicycle safety
- Traffic Impacts to emergency response

Open Space & Land Use (5)
- Open Space
- Trees
- Parks-Accessibility
- Land Use & Development
- Regionally appropriate vegetation

Economic Development (8)
- Economic diversity
- Business reinvestment in the community
- Jobs/Housing balance
- Cost of Living
- Quality Job Creation
- Income Disparity
- Resource efficiency of local businesses
- Local employment of City staff

Housing (5)
- o Availability of affordable housing
- o Distribution of affordable housing
- o Affordable housing for special needs groups
- o Production of "livable"
- o Production of "green"
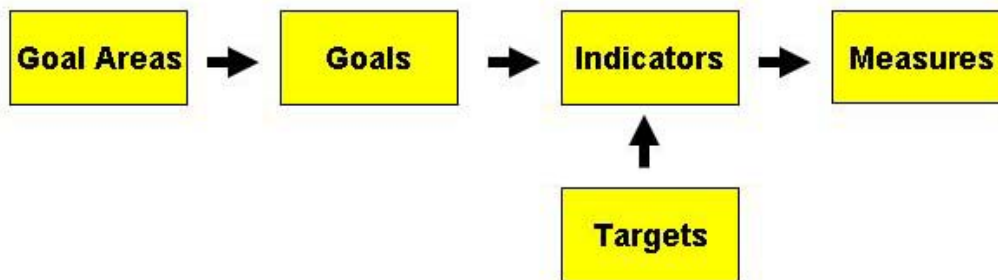
Community Education / Civic Participation (8)
- o Voter participation
- o Participation in civic affairs
- o Empowerment
- o Community involvement
- o Volunteering

- o Participation in neighborhood organizations

Human Dignity (10)
- o Basic Needs- Shelter
- o Basic Needs- Health Care
- o Basic Needs- Economic Opportunity
- o Basic Needs- Public Safety
- o Residents' perception of safety
- o Incidents of abuse
- o Incidents of discrimination
- o Education / Youth
- o Empowerment
- o Ability to meet basic needs

Each goal area has specific goals with outlined "targets," which are numerical objectives to be reached by 2010, using the year 2000 as the baseline. Indicators are used to assess how well the city is meeting its objectives and goals as outlined by the *Plan*. There are 66 indicators total. The number next to the goal area indicates how many each has. A matrix developed by the city shows how many of the indicators can be used to measure conditions, impacts, or effectiveness of attempted actions in several goal areas. The city uses two types of indicators: "system level indicators measure the state, condition or pressures on a community-wide basis for each respective goal area" and "program level indicators measure the performance or effectiveness of specific programs, policies or actions taken by the City government or other stakeholders in the community." The specific goals, targets, and indicators are too numerous to be listed here, but can be found within the *Plan*.

Assessment

The City's Program continues to operate successfully. The Sustainable City Plan Coordinator stated in a recent conversation that the program's clear and understandable format was the key reason for its success. The *Plan* outlines 9 principles to guide city officials in decision making and sets goals to work toward. There is a logical progression from the *Plan's* goal areas to goals to targets to indicators. The coordinator stressed that is important for the public as well as the decision makers within city hall to see that "what gets measured, gets managed." It is for this

reason that the *Plan* has been able to be integrated into policy decisions at the highest levels of city hall.[7]

The *Plan* is updated every year. The city recently started to produce a yearly Report Card that rates the city's progress toward achieving the adopted goals with grades for achievement and effort and then contrasts these two grades with those from the prior year. For example, "Resource Conservation" received an achievement grade of "C" and an effort grade of "A" in 2005, but in 2006 an achievement grade of "C+" and an effort grade of "A". Both the website and Report Card are excellent examples of significant efforts toward public outreach. The Plan Coordinator says the Report Cards have been immensely successful as a marketing tool. They help paint a picture of how the city is doing, showing both positive and negative trends. They also act as source for holding the city accountable for its actions.

All of the elements of the Program can be found online on a webpage that is both accessible and interesting. Launched in 2005, the "Progress Report" website discusses the status of each goal area and then assesses its progress with a with a letter grade (A-F). For example, "Transportation" currently has a "C" grade.   In addition, the site allows the public to view sustainability trends. It presents information on whether an issue is improving, stable, worsening, or mixed/unknown.

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[7] The first time I called Santa Monica's Sustainable City Program, my call immediately got directed to voice mail because city hall is apparently closed every other Friday as part of the city's mission to reduce air pollution.

Santa Barbara South Coast Community Indicators Project
Santa Barbara Region Economic Community Project
Community Environmental Council
University of California – Santa Barbara
Santa Barbara, California
http://www.ucsb-efp.com/indicators/index.htm
http://www.sbecp.org/
(805) 893-5739

Process

The Santa Barbara South Coast Community Indicators Project produced 6 community reports from 1998-2003 in an effort to "measure the social, environmental and economic factors that make up the quality of life in our community."[8] The project dated back to a successful, two year pilot program begun in 1994 by the Community Environmental Council. The strong support it received from this initiative allowed the Council to establish a framework for a future indicators project, which included forming a board of trustees and steering committee. Literature on the project makes specific reference to the significance of the project being two-fold: the process of indicator development was just as important as the production of the annual reports. For the sponsors, the process behind producing the annual project report served as a method of instigating public dialogue on important issues.

The steering committee initiated the public outreach phase during the summer of 1997. This phase consisted of 11 public meetings where area residents were asked to share "what they felt was important about their community and what they thought should be measured."[9] The list of invitees was broad and all encompassing. The project trustees and steering committee, together, selected the final list of indicators after reviewing the extensive list of public comments and determining the availability of necessary data. The Project produced the first document in January 1998.

Five additional annual reports followed: 1999-2003. Each year the focus, and as a result some of the indicators, changed. For example, the 2003 report focused on low income populations and poverty. As a result, the topic poverty was added and assessed by 7 indicators. The steering committee convened a series of focus groups each year of the project to obtain input on the new indicators and to gather feedback on the results of last year's report. For example, they involved over forty community leaders during three focus groups to prepare for the 2000 report.[10]

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[8] References for profile: *1998 Community Indicators Report*, Community Environmental Council, Santa Barbara, CA; *2000 Community Indicators Report,* UCSB Economic Forecast Project, Santa Barbara, CA; *2003 Community Indicators Report*, UCSB Economic Forecast Project, Santa Barbara, CA; *South Coast Regional Impacts of Growth*, Santa Barbara Region Economic Community Project, Santa Barbara, CA; Bill Watkins, Executive Director, UCSB Economic Forecast Project, Santa Barbara, CA; Eric Sonquist, Director of Finance and Administration (former project member), UCSB Institutional Advancement, Santa Barbara, CA.
[9] *1998 Community Indicators Report*, 2.
[10] *2000 Community Indicators Report*, 1.

Researchers from the University of California-Santa Barbara's Economic Forecast Project compiled all data from the various public sessions and wrote all 6 of the project reports. Funding for the reports came from charitable foundations, private companies, a regional economic development coalition, the city of Santa Barbara, and the county of Santa Barbara. Staff from the UCSB Economic Forecast Project, Community Environmental Council and, later, the Santa Barbara Region Economic Community Project collectively provided ongoing project oversight. Hard-copies of the reports were delivered to government officials and employees while electronic versions were sent to area developers, architects, and non-profit organizations.

Indicators

The Indicator Project follows a logical progression that first starts with three broad categories: Social, Environmental, and Economic. Each category then has topics or issues that the steering committee wanted an assessment performed on. Each topic has several indicators that are used to assess how the area is doing on that topic. For example, in order to gauge the "Individual and Family Well-Being" of the study area four indicators were selected: cases of domestic violence, cases of child abuse and neglect, births to teen mothers, and elementary school lunch participation. Each indicator is described by up to three measurements, although most are informed by singular measures. In the above case, a measure of domestic violence was the number of 911 calls reported to police and sheriffs department. The list below outlines the three categories with associated topics and corresponding number of indicators.

Social Topics & Number of Indicators
  o Individual and Family Well Being (4)
  o Neighborhood and Community Well Being (5)
  o Public Health (2)
  o Poverty (7)
  o Education (5)
  o Civic Engagement (8)
  o Cultural Resources (2)

Environmental Topics & Number of Indicators
  o Water Quality (1)
  o Air Quality (2)
  o Land Use (3)
  o Mobility (4)
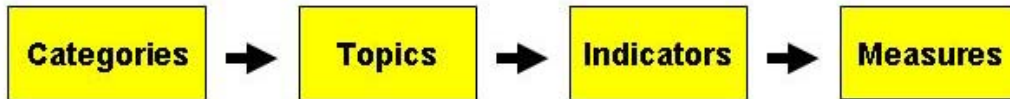 o Resource Use (3)
  o Natural Community (1)

Economic Topics & Number of Indicators
  o Standard of Living (2)
  o Job Quantity and Quality (5)
  o Business Vitality (2)
  o Housing Affordability (3)

All together there are 59 indicators and corresponding measures. The steering committee chose indicators based on the following criteria:
  • Indicators are bellwether measures.

- Indicators primarily measure outcomes.
- Indicators have clear, shared meaning across the community.
- Indicators are measurable, and data is both reliable and available over the long term.

Assessment

While the indicator project was originally intended to be ongoing, a 2004 report was never attempted. Two former project members recently provided some insight on why this occurred.

1. *Media accusations of biased reports.* The media went from enthusiastic full-page articles about findings from the report to critical reviews of the entire endeavor. The project claimed its purpose was to provide a "balanced and comprehensive" analysis of the community in order to "raise the level of debate and stimulate a more inclusive and fact-based community dialogue." The media, however, felt the reports represented a biased perspective of the region.

2. *Data collection.* Finding consistent, reliable data was harder than originally anticipated. Project members often wanted to measure trends for which there was no data.

3. *Project funding.* It was an expensive project. The project was funded through donations by charitable foundations, grant money, and the budget of the sponsoring organization; however, it still cost estimated $60,000 to produce a report each year. The allocated grant money was not meant to be annual, and when it expired so did a source of support for the project.

4. *Mismatch between indicators and action.* Unlike some of the other indicator projects under analysis in this report, this one developed without a complementary plan. The project was always about the production of a report based on data analysis. Some members became frustrated with the project because it did not address strategies that responded to the report's findings.

5. *Loss of public and media interest.* The researcher indicated that a yearly report was perhaps too much. The results of the assessment did not show much change from 1998-2003. Considering how expensive the projects are, production of a report every 2-3 years would make more sense. In the researcher's opinion, the publication of the assessment results would garner more public interest if it was not so routine. The results would perhaps be more jarring this way and lead to actual "ongoing public dialogue regarding the quality of life based upon good factual information"—the original intent of the report.[11]

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[11] 2003 Community Indicators Report, "Introduction"

6. *Loss of sponsor interest.* The sponsoring organization lost the continued interest of the public and as a result lost interest in the project themselves. One former project member believed that many of the project volunteers lost interest because the reports became too focused on data collection and less on public engagement. To remedy this, he suggested that data collection and reporting should be farmed out to a third-party organization, freeing volunteer effort for public outreach. For reasons 5 and 6, he strongly suggested shifting the focus of the report every year to keep volunteer, media, and general public interest stimulated.

Over time, the production of the report became more of a staff project than a community project because of all the technical components. The UCSB Economic Forecast Project started using the same data sets for other reports, and therefore basically mainstreamed the data. For all of the above mentioned reasons, the Santa Barbara Region Economic Community Project (SBECP), the project sponsor at this time, decided to focus efforts on other initiatives that would enhance the region's quality of life. The organization published The *South Coast Regional Impacts of Growth* (RIGS) study in 2005 to assess the region's response to growth-related policies and hypothesize how the region could look based on alternative growth scenarios. One of the former members believes the Community Indicators Project and subsequent initiatives of the SBECP affected local politics—pro-environment candidates swept elections in the early 2000s.

Despite the fact that the project did not progress after 6 editions, it is still worthwhile to point out that the report itself was an effective mode of public outreach. The reports were published in a clear and engaging format. Outlined by topic, each half to full page starts with an attention-grabbing statement about the results of the assessment (which was the measurement of the indicator). A discussion on the type of measure used, the importance of the indicator, and the area's performance measured by the indicator follows—all clearly organized by subtitles. In addition each section included a chart, graph or map, visually explaining any trends.

Indicators for a Sustainable San Mateo County

Sustainable San Mateo
San Mateo, California
http://www.sustainablesanmateo.org/indicators-report/
(650) 638-2323

Process

Sustainable San Mateo County (SSMC), a non-profit group, has produced 11 annual reports from 1997-2007 that track the health of the county using indicators. A group of concerned citizens from the region formed Sustainable San Mateo County in 1992 to "create a broader awareness of the sustainability concept" and decided to develop an indicator project as a way to increase awareness.[12] They became a non-profit group under the administration of the Tides Center in 1996 and an independent non-profit in 2001. Their current mission states that the organization is "dedicated to the long-term health of our county's economy, environment and social equity." The indicator project and its annual report *Indicators for a Sustainable San Mateo County: An Annual Report Card* is the organization's core program. The organization distributes the reports annually to government policy makers, members of local chambers of commerce, environmental and social organizations, area businesses leaders, civic groups, and individuals. The purpose of the report is to influence area leaders to make sustainable decisions.

A small working group undertook the following, ordered steps to produce the first report:
1. Administered an informal "quality of life" survey in waiting rooms of medical clinics.
2. Gathered information on cities that had indicators in place.
3. Conducted interviews with "people of importance"
4. Asked "people of importance" to recommend additional "key people" who could be included the project development or who could supply additional data sources.
5. Developed a working draft of indicators from these interviews.
6. Mailed draft to all interview participants to receive feedback.
7. Mailed draft to newly identified "key people" in the community.
8. Compiled results from feedback.
9. Identified even more "key people."
10. Resent the updated draft to project participants and newly identified "key people."
11. Held a public workshop (advertised by flyer at the county's 20 libraries) and received feedback on the "appropriateness of the draft indicators."
12. Held a public workshop to present models of other indicator projects and then obtain feedback on the format Sustainable San Mateo should take.

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[12] Profile References*: 2000 Indicators for a Sustainable San Mateo County*, Sustainable San Mateo County, San Mateo, CA; *2001 Indicators for a Sustainable San Mateo County*, Sustainable San Mateo County, San Mateo, CA; *2007 Indicators for a Sustainable San Mateo County*, Sustainable San Mateo County, San Mateo, CA; "SSMC Beginnings," Sustainable San Mateo County, San Mateo, CA; Sustainable San Mateo County website, http://www.sustainablesanmateo.org; Tyler Hammer, Executive Administrator, Sustainable San Mateo County, San Mateo, CA.

Over the course of three years, 120 members of the public gave input on the indicator project. At the end, the working group (now much larger than the initial 5 members) decided on a model, and they enlisted the help of volunteers to write and produce the report. They secured a grant of $10,000 to print and distribute the first report. Since this point, they have routinely asked the twenty cities within San Mateo County for a donation of $1,500. They also hold fundraisers and receive support from area foundations, grants, and membership dues. A staff of three (only one is permanent/full-time) oversees the project, operating under the guidance of the organization's board of directors and advisory council.

Indicators

The organization chooses indicators based on their "importance to one of the three goals of sustainability: a healthy environment, society, and economy."13 They generally use the same indicators each year, although they have made some minor additions or subtractions throughout the past 11 years. The 2007 report contained 32 indicators. They are listed below by category.

Environment
o Air Quality
o Bay and Ocean Water Quality
o Carbon Emissions
o Contaminated Sites
o Drinking Water Quality
o Ecological Footprint
o Green Building
o Land Use and Habitat Protection
o Pesticide Use
o Solid Waste
o Water Use

Society
o Child Abuse
o Child Care
o Children's Health
o Community Health
o Crime
o Education
o Homelessness
o Parks and Open Space
o Population
o Public Library Use
o Voter Participation

Economy
o Agriculture
o Energy Use

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[13] "About this Report," *2007 Indicators for a Sustainable San Mateo County*, Sustainable San Mateo County, San Mateo, CA.

- o Gasoline Use and Vehicle Fuel Efficiency
- o Genuine Progress Indicator
- o Health Care
- o Housing Affordability
- o Jobs
- o Poverty and Income Distribution
- o Transportation
- o Unemployment

Each indicator reading is a composite of several separate measurements. For example, data on electric and natural gas consumption by year, average residential electric and natural gas use per household for 2005, and watts installed for solar photovoltaic systems by year, all informed the "Energy Use" indicator.

Assessment

The organization produces a report each year and widely distributes the report to local government officials and staff, business leaders, and civic and community organizations. According to the executive administrator of Sustainable San Mateo County, the report's assessment impacts the county in various ways. City staff members routinely refer to the reports in plans and annual budgets. San Mateo County uses the data to formulate benchmarks and track trends. The local realtors association, an unforeseen audience, uses the report to have a better understanding of county trends. The report also began featuring local cities (19 in 2007) that have taken measures to ensure a sustainable future with one-page summaries.

The executive administrator gave several reasons for the success of the indicators project. First, the organization spent a considerable amount of time identifying people who they believed should be reading the report during the early stages of the project. Getting these "key people" to understand and support the project has allowed the organization to produce a report annually.

Second, the report is produced at a relatively low cost. This is mainly due to volunteer efforts. The organization employs only one full-time staff member. Volunteers find and assess the data as well as help write the report. Allocations from city budgets and donations from area organizations help keep production costs low.

Third, the report is published in a clear and engaging format. Each indicator has its own page and it starts with an attention-grabbing statement about the results of the assessment. This is followed with a discussion on why the results are important, what would be the sustainable state for the indicator, and how the county is performing. Each page also includes a chart, graph or map, visually explaining any trends.

Fourth, the organization strives to uphold a neutral position within the county. Staying out of politics helps the organization maintain the position that the assessment provides objective, fact-based information. Lastly, the organization tries to keep a public face within the community. They recently hired an outreach coordinator to disseminate the results from the assessment. This part-time staff member gives free presentations on the most recent findings. The organization also hosts an annual awards program that recognizes area "businesses, community groups, and individuals that have demonstrated an outstanding commitment to bringing sustainable practices to their work."[14]

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[14] "Awards," Sustainable San Mateo County website, http://www.sustainablesanmateo.org.

The Livable Tucson Vision Program: City of Tucson

City of Tucson
Tucson, Arizona
http://www.ci.tucson.az.us/livable2.html
(520) 791-4505

Process

Tucson's Mayor and City Council began the Livable Tucson Vision Program in 1997 in order to develop a long-term vision for the city and used sustainability indicators to measure progress towards that vision. The program's purpose was to inform the structure of both the city budget and community programs and services. The city took a multi-faceted approach to receive public input for the program. They held three public forums in each ward to formulate a common vision and strategies for achieving this vision as well as additional forums targeting businesses, youth and Spanish speakers. They enhanced their website to enable the public to contribute ideas for visions and strategies online.

Overall, a total of 1,200 individuals contributed through one of these avenues. Participants' comments were formulated into 17 key goals: the Livable Tucson goals. Six different workshops were held following the identification of these goals, in order to develop indicators. Following the successful identification of Livable Tucson goals and indicators, an interdepartmental team of city staff (Livable Tucson Team) was formed in 1999. The team's responsibilities were three-pronged:
- Refine indicators and strategically plan for regular indicator data collection
- Review City of Tucson projects to evaluate and identify sources of additional collaborations
- Determine strategies for communicating progress on Livable Tucson to the community

Indicators

There were 17 key goals formulated by Livable Tucson. The progress made towards each goal is measured by 3-6 key indicators (71 indicators total), listed under each of the goals.

1. Better Alternatives to Automobile Transportation (4 indicators)
Use of alternative means of travel
Ratio of miles of quality pedestrian and bike paths and bus routes to total lane miles of roads
Number of days you can see Rincon Peak from Tumamoc Hill
Number of pedestrians in neighborhoods

2. Engaged Community and Responsive Government (3 indicators)
Number of active, cohesive neighborhoods
Participation rates in community meetings
Percent of citizens rating local government as responsive

3. Safe Neighborhoods (3 indicators)

Number of pedestrians in neighborhoods
Neighborhood crime rates
Percent of people who feel safe in their neighborhood

4. Caring, Healthy Families and Youth (5 indicators)
Volunteerism among youth
Time spent with family
Percentage of employees with health benefits
Incidence of referrals to Child Protective Services
Level of participation by parents in schools

5. Infill and Reinvestment (4 indicators)
Ratio of City building permits to total regional building permits
Dollars invested in restoring and renovating inner-city buildings
Ratio of protected natural desert to total developed land
Percentage of residences located within half a mile of a market

6. Excellent Public Education (6 indicators)
Level of participation by parents in schools
Percentage of students going on to higher education or technical training
Community satisfaction with public education
High School Drop Out Rate
Percent of hiring from local job pool
Attendance at libraries and museums

7. Abundant Urban Green Space and Recreation Areas (4 indicators)
Ratio of urban open space to developed land
Cleanliness of the community
Ratio of miles of quality pedestrian and bike paths to total lane miles of roads
Percentage of residences within half a mile of designated open space

8. Protected Natural Desert Environment (4 indicators)
Ratio of protected natural desert to total developed land
Area of preserved or restored urban washes and wildlife corridors
Population and diversity of key native wildlife species
Miles of trails and bikeways in desert preserves in eastern Pima County

9. Better Paying Jobs (5 indicators)
Percent of hiring from local job pool
Percentage of employees with health benefits
Homeownership rates
Income needed to support basic needs
Average Earnings in Tucson

10. Clean Air and Quality Water (4 indicators)
Number of days you can see Rincon Peak from Tumamoc Hill
Level of the aquifer
Citizen satisfaction with water quality
Days that Tucson operated with no violations of federal clean air and water standards

11. People-Oriented Neighborhoods (5 indicators)

Number of pedestrians in neighborhoods
Number of neighborhood projects and events
Use of alternative means of travel
Number of gathering places and people using them
Percentage of residences located within half a mile of a market

12. Respected Historic and Cultural Resources (4 indicators)
Number of historical sites
Dollars invested to restore older or abandoned buildings
Number of people visiting historic and cultural sites
Tourism rates

13. Quality Job Training (4 indicators)
Percent of hiring from local job pool
Income needed to support basic needs
Percentage of residents who feel they have adequate job training opportunities
Level of resources devoted to training

14. Reduced Poverty and Greater Equality of Opportunity (3 indicators)
Homeownership rates
Income needed to support basic needs
Per capita charitable giving

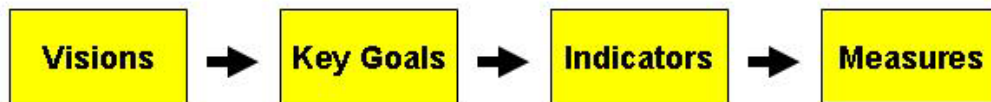## 15. Strong Local Businesses (4 indicators)
Percentage of major employers headquartered in Tucson
Percentage of employees with health benefits
Percentage of companies adding employees in the past year
Duration of local businesses

16. Efficient Use of Natural Resources (4 indicators)
Ratio of protected natural desert to total developed land
Per capita water consumption
Recycling as a percentage of total waste
Renewable energy as a percentage of total energy use in the region

17. Successful Downtown (4 indicators)
Number of residents who come downtown for entertainment
Number of downtown residents
Sales taxes from downtown businesses compared to City-wide sales taxes
Dollars invested in downtown restoration and new development projects

Assessment

Unfortunately, recent conversations with the City of Tucson revealed that the project is no longer active. The political priorities in the city changed with new city managers, and Livable Tucson

was shelved and replaced with new projects. Although the indicator project is no longer advancing there are plans to hand it over to the newly formed Department of Planning and Conservation. Should the project be revived, new coordinators should seriously consider leaving the website framework in place.

All of the goals are presented on the City of Tucson website in a user friendly and understandable format. Users are able to learn how the indicators are measuring each goal. Visitors to the website are also able to see the specific city department assignments for each goal. In addition, citizens can read about what they can personally do in order to further the progress on each goal (i.e. for the goal Better Alternatives to Automobile Transportation—citizens are asked to: ride the bus, bike when they can, and telecommute when possible). Although the data compiled for the indicators is out of date, the combination of narrative and graphic depictions achieves a straightforward, comprehensive assessment that is accessible to the public. With new coordination in place hopefully the long term plan to turn the indicators into a "community report card" will be realized.

The Cape Cod Sustainability Indicators: An Uncertain Future

The Cape Cod Center for Sustainability
Cape Cod, Massachusetts
http://www.sustaincapecod.org/
(508) 375-0969

Process

Cape Cod's Sustainability Indicator Project began in 1997 with the creation of a Sustainability Indicators Council, a group of 27 members. Members of the council represented non-profits, housing authorities, county government, local government and educational institutions.[15] The Cape Cod Center for Sustainability—a non-profit, volunteer run organization—coordinated the formation of this council with the purpose of defining what sustainability means to Cape Cod and to develop indicators intended to track the Cape's efforts towards achieving a sustainable community. The Cape's definition of sustainability emphasizes the interconnections between a stable economy, healthy natural environment, and social justice. This concept formed the core of the indicators project and helped the Council develop a vision for a sustainable Cape Cod: a safe and nurturing social environment; a healthy, natural environment; and a thriving, diverse, sustainable economy.

In order to break down this vision into concrete issues, the Council identified 7 underlying goals including:

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[15] Profile References: *Cape Cod Sustainability Indicators: An Uncertain Future* (2003), Cape Cod Center for Sustainability, Cape Cod, MA; Allen Larsen, Volunteer, Cape Cod Center for Sustainability

1. Accessible Services
2. Balanced Demographics
3. Continuous Education
4. Creative Economy
5. Directed Growth
6. Integrated Infrastructure
7. Valued Ecosystems

Once this framework was in place the Sustainability Indicators Council came up with an initial set of 39 indicators in 1998. Public outreach efforts contributed to the final selection of 12 indicators. In 1999, the Council published the first Sustainability Indicators Report.

- Three years later in 2002, the report was revisited for an update. The Council approached the update by breaking into three sub-committees (social, environmental, economic) in order to evaluate the effectiveness of each indicator. Discussion amongst each of the subcommittees caused the alteration, subtraction and addition of new indicators.

The 2003 report contains the final list of 15 indicators. The reports were intended to be used as a decision-making tool for citizens, educators, and public officials. The Council particularly hoped it would be championed by what they called the "three touchstones:" an informed populace, visionary leaders, and engaged institutions. The publication of the report was funded primarily by NSTAR, a Massachusetts-based electric and gas utility company. Supplementary funding was provided by the Chamber of Commerce in several localities, local businesses and foundations.

Indicators

The 15 Indicators were developed out of the three-pronged vision and are grouped accordingly:
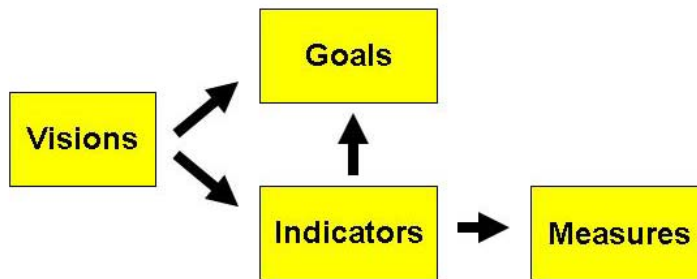
Safe and Nurturing Social Environment
1. Voting and Civic Participation
2. Population Access to Health Care
3. Preventative Health and Substance Abuse
4. Youth Wellness

Healthy, Natural Environment
1. Drinking Water Quality and Quantity
2. Air Quality
3. Land Use and Open Space
4. Waste Management
5. Energy Supply and Use
6. Traffic Congestion and Transit Use

Thriving, Diverse and Sustainable Economy
1. Workforce Housing
2. Employment and Workforce Wages
3. Tourism and Hospitality
4. Retirement Economy
5. Building Human Capital

Assessments

A recent conversation with the Executive Director at the Center for Sustainability focused on the one of the key decisions that contributed to the successful selection of indicators for the Sustainability Indicator Council. This decision was to maintain a small working group of "doers" and a larger group of "reactors" to shape information supplied by the working group. This setup should be considered down the line when the Pioneer Valley Sustainability Network establishes a preliminary selection of indicators.

The 2003 indicator report, *The Cape Cod Sustainability Indicators: An Uncertain Future,* clearly breaks down the data into explanatory sections. The report highlights community trends, as well as identifies the relationships between each indicator and the prognosis for achieving sustainability in Cape Cod. The public is drawn into the report with recommendations for personal actions that contribute positively to regional sustainability. Unfortunately the length of the report (96 pages; with a minimum of 3 pages devoted to each indicator) and the nature of the extended introduction—detailed, complex, and theoretical, turn it into a document best-suited for the council that created it. The report was difficult to find online however it was immediately sent upon request.

Since the last report was published, in 2003, the Sustainability Indicators Council has disbanded, and the Cape Cod Center for Sustainability has developed a new focus for the indicators. The Center continues to list indicator information on the website, but instead of updating this information going forward, the website will act as a tool to lead visitors to the "indicator expert." For example, the air quality indicator will have links to the EPA website. The Center's philosophy is that instead of trying to be an expert on all the indicator issues their new role will be that of a broker, charged with smoothing links between information seekers and the information source.

Engagement is another focus of the Center for Sustainability. The Center's website publishes a monthly newsletter, maintains a calendar of sustainability related events, and a community directory with businesses and non-profits interested in integrating sustainability in their operations. The Center's mission is to work against the silo effect, the circumstance that occurs when organizations are operating without the knowledge of common goals of other organizations. This goal also seems to be one of the primary missions of the Pioneer Valley Sustainability Network.

Martha's Vineyard Indicators Project: Measures of Sustainability

Martha's Vineyard Commission
Martha's Vineyard, Massachusetts
http://www.mvcommission.org/
(508) 693-3453

Process

The Martha's Vineyard Indicators Project was coordinated by The Martha's Vineyard Commission (MVC).[16] MVC was created by Dukes County voters and the Massachusetts General Court to manage Island development. The Commission is responsible for regional land use planning for all of the towns in Dukes County and maintains certain regulatory authority regarding development in the six towns of Martha's Vineyard.

In 2000, a group of individuals from Martha's Vineyard sought to create a set of indicators that would "provide a gauge of the natural, economic, social and individual well-being of Martha's Vineyard and its inhabitants."[17] The mission of these indicators was to form connections between these different issues and provide a supportive framework for community and individual decision making. This citizen effort grew into the Martha's Vineyard Indicators Project, and the group of individuals later became known as the project steering committee.

The steering committee brought the idea of sustainability indicators along with a funding opportunity from the Executive Office of Environmental Affairs (EOEA) to the MVC. At this time MVC engaged in conversation with the Cape Cod Commission and Sustainable Nantucket to decide whether to embark on a sustainability indicator project together. The result of the conversation was that each group believed the success of the project for their community, would rely on having distinct community indicators. The Martha's Vineyard, Nantucket, and the Cape Cod each produced separate sustainability indicators.

In 2001, MVC received a Watershed Initiative Grant from EOEA. The grant was matched with either money or in-kind resources from the Edey Foundation, the Wampanoag Tribe of Gay Head (Aquinnah) and the MVC. There was also significant volunteer time from the public (residents and non-residents).

The Martha's Vineyard Commission took responsibility for the project, but made the decision that the structure setup to develop the indicators should be an independent effort. MVC staff was charged with primary and secondary data collection but formally the project was assigned to the Planning and Economic Development (PED) committee. PED contracted the consulting firm AtKisson to organize a citizen-based group to develop the indicators. The following groups represent citizen input:

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[16] Profiled Resources: *Martha's Vineyard Indicators Project: Measures of Sustainability* (2005), Matha's Vineyard Commission, Oaks Bluff, MA; William Veno, AICP, Senior Planner, Martha's Vineyard Commission
[17] Martha's Vineyard Indicators Project: Measures of Sustainability, Bill Veno, July 2005. p5

- Steering Committee (SC): This group, a core group of diverse citizens (14 to start and 27 in the end), managed the project.

- Community Advisory Group (CAG): Fifty-eight people selected by the Steering Committee formed a panel of community advisors. The role of the CAG was to develop a list of indicators to recommend to the SC.

- Technical Advisors Group (TAG): Twenty-four experts (academics, consultants, and analysts—from business, government, and public agencies) from various fields were convened to inform the technical aspects of the indicators, with a central focus on the availability of data.

- Focus Group: A group of twelve citizens with no prior knowledge of the indicators project who were able to provide another form of citizen input.

The indicator project went through three major steps that led to the production of a report.

1. Community assets and concerns were identified
To do this the consultant, AtKisson used past studies and surveys to compile a list of Vineyarders' perceptions of assets and concerns of Martha's Vineyard. The items on the list were divided into four categories: nature, economy, society and well-being (society and well-being are differentiated in the following way: society refers to the broader social goals and well-being refers to individual social goals). The four categories were referred to as the groups' compass: North: Nature, South: Society, East: Economy, West: Well-being. The categorized list then went for review to the SC and the CAG. The CAG also identified measurement tools for each issue (previously referred to as assets and concerns).

2. Indicator measures were identified
The CAG focused on the measurement of the issues in order to identify sustainability indicators. The CAG made a preliminary ranking of the categorized list compiled by AtKisson. The list, which included more than 60 candidate indicators, was shown to a Focus Group in order to illicit feedback. After the Focus Group feedback was integrated, the Technical Advisory Group made changes before the list of indicators was sent to the Steering Committee. Due to lack of interest in attendance, and a disintegration of the SC, MVC Staff and AtKisson took over the final narrowing down of the indicators (for an exhaustive documentation of methodology concerning this part of the process please refer to the Martha's Vineyard Indicators Project Measures of Sustainability). The final list of indicators were published, and then presented at a summer forum on sustainability (in 2005).

3. Implementation strategies were developed
The volunteer group fell short of completing this final step and MVC staff took over….

Indicators

The Martha's Vineyard Indicators are organized into four categories: Nature, Economy, Society and Well Being. The following is a list of the indicators:

Nature (4 indicators)
Land Use Change
Water Quality of the Great Ponds
Solid Waste Stream
Energy Consumption

Economy (3 indicators)
Housing Affordability
Job Mix
Transit Ridership

Society (5 indicators)
Political Engagement
First-Time Homeownership
Physical Health
Emergency Room Admissions
Seasonal Residents

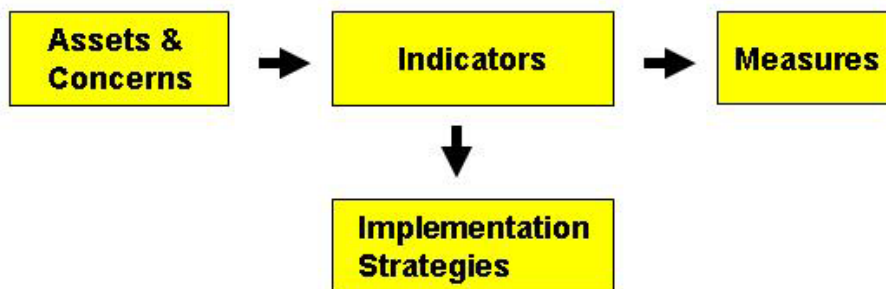**Well-Being (3 indicators)**
Cultural Continuity
Sense of Community
Traffic Congestion

Each indicator was assigned a specific measure for monitoring purposes. Proxy measures were given to indicators when there was no obvious choice of a measurement (i.e. the percent of people living in the same place for the past five years is used to measure Sense of Community). A staff member of MVC applied the chosen measurements to each indicator to for the assessment.

Assessment

In *Martha's Vineyard Indicators Project Measures of Sustainability*, MVC strives to make the data understandable and draw connections between future work on the sustainability indicators through narrative sections that explain what is being measured, what this measurement means, its connection with other indicators, and its relevance to the future of Martha's Vineyard. In the report, a section is dedicated to the evaluation of each indicator. The status and trend of the sustainability indicator is explained through data. For example, the status of the Land Use Change indicator is that "nearly 1/10th of the Vineyard changed from Forested to Low-Density Residential in the last three decades of the 20th century."[18] The trend is that "Martha's Vineyard

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[18] Martha's Vineyard Indicators Project: Measures of Sustainability, Bill Veno, July 2005, p 9

woodland is steadily being replaced with the buildings, driveways and yards of incremental, low-density residential development (i.e. sprawl)."[19]

One of the goals in compiling the information for this project was to use it in the Martha's Vineyard Comprehensive Planning process. According to recent conversations with MVC staff this Comprehensive Planning process is soon to commence and plans are still in place to focus on the work that was done in the Sustainability Indicator project. There is also hope that the Comprehensive Planning process will produce additional indicators; as well as establishing a system to update the indicators on a regular basis. Unfortunately, when the citizen groups begin to disintegrate and MVC staff took over the project, they were unable to identify organizations to take on the responsibility of tracking different indicators. One MVC staff member stated that the lack of a "champion" for the project made it difficult to get stakeholders involved enough to adopt particular indicators. Another situation that prevented successful implementation was that the group simply reached an in pass on how to proceed with common agreement.

Two other obstacles to successful indicator implementation, cited by MVC were the following:
- the meaning of sustainability elicited widely different opinions that made a workable consensus difficult;
- the tasks involved in the project (associated with completion of the grant) were seen as top-down instead of the continuance of a homegrown effort

Relevant to note, the community of Nantucket went through a similar process with the same consultant but ended without finishing the implementation stage. In Nantucket, the indicators have been established, the baseline data was compiled but it has not been updated or been used since its inception. Alternatively, The Cape Cod Center for Sustainability has published data on their indicators two times.

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[19] Martha's Vineyard Indicators Project: Measures of Sustainability, Bill Veno, July 2005, p 9

Fifty Year Vision and Indicators for a Sustainable Minneapolis, 2004

Crossroads Resource Center
Minneapolis, Minnesota
http://www.crcworks.org/msi.html
(612) 869-8664

Minneapolis – Living Well, 2007 Sustainability Report

City of Minneapolis
Minneapolis, Minnesota
http://www.ci.minneapolis.mn.us/sustainability/2007SustainablityReport.asp

Process

The Minneapolis sustainability indicators project started as a grassroots initiative and was later adopted by the City of Minneapolis. The project now results in an annual sustainability report based upon indicator readings.

The roots of Minneapolis' sustainability indicators project can be traced back to 1992, the year the Minnesota Sustainability Initiative was founded. The Urban Ecology Coalition (UEC) emerged from this group of labor unionists and environmentalists in 1994, and they formed a partnership with the Crossroads Resource Center in the mid 1990s to begin the Neighborhood Sustainability Indicator Project. This project took shape in roundtable discussions that took place in 1998, 1999, and 2000, during which residents defined measures of sustainability that aligned with long-term community visions.

The City of Minneapolis acknowledged its support of the project in 2003 when it the city council adopted a resolution that authorized the addition of a Sustainability Chapter to the City's Comprehensive Plan and it launched a city Sustainability Initiative. The Minnesota Office of Environmental Assistance (OEA) also backed the project by contributed funding. [20] The Mayor at the time then committed the City to use the sustainability indicators to allocate budget priorities. [21]

The two partnering organizations held a conference on sustainability in 2004 during which 65 individuals attended a roundtable discussion on the future indicators project.[22] Broken down into sub-groups of 4-8 clusters, participants were asked: What would a more sustainable Minneapolis look like? A list of visions developed from this exercise. Roundtable participants were then

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[20] This project was partially funded by the State of Minnesota, Office of Environmental Assistance, who has funded three innovative, start-up sustainability indicators projects throughout the state.

[21] Fifty Year Vision and Indicators for a Sustainable Minneapolis, 2004, Ken Meter: Crossroads Resource Center p3

[22] The 65 individuals that attended the roundtable included residents, educators, students, consultants, city staff, and city committee members.

asked a second question: How will we know we are getting there? Ideas of different sustainability indicators were presented and facilitators encouraged the group to develop indicators that encompassed the three E's of sustainability.

In May of 2004 another roundtable discussion was held entitled, "Clarifying Vision & Indicators." The 24 people that attended this roundtable discussion used the visions and indicators developed by the earlier roundtable discussions to come up with a final list of indicators. There were a total of 13 visions (each vision is categorized as pertaining to one of the three E's) that informed the 30 indicators, documented in the final report.

The final report *Fifty-Year Vision and Indicators for a Sustainable Minneapolis, 2004* was coordinated by Crossroads Resource Center and sponsored by Minneapolis Environmental Services, Citizen's Environmental Advisory Committee (CEAC), Minneapolis Planning (now Community Planning and Economic Development, CPED), Minnesota Office of Environmental Assistance (OEA), and Draw Forth Consulting.

Despite its substantial involvement in the development of this project, the Crossroads Resource Center found that it did not have the funds to implement the indicators portion of the project report. Fortunately, the project did not end: the City of Minneapolis decided to adopt it.

City-Driven
With strong support from the current Mayor, the City of Minneapolis assumed responsibility for updating and integrating the indicators project into city policies and programs. The city created an Environmental Coordinating Team and charged them with updating the project. This Team collaborates with the Citizen's Environmental Advisory Committee (CEAC), a group of 18 citizens who provide feedback on the indicators and other environmental projects and policies. Working together, these two groups adapted the indicators established by the *Fifty-Year Vision and Indicators for a Sustainable Minneapolis* to a new list of indicators. City staff also established numerical targets for each indicator. Under the coordination of the Environmental Coordinating Team, the City now presents an Annual Sustainability Report that addresses progress made towards meeting the numerical targets set within each indicator. The annual report creates an opportunity for discussion and critical thinking between key decision-makers (city staff and policymakers) as well as provides a comprehensive overview for the citizens of Minneapolis.

Indicators
In *Fifty-Year Vision and Indicators for a Sustainable Minneapolis,* two different types of indicators were developed out of the visions; core and background. The Core Indicators are "linked indicators useful for local residents as well as for external investors, funders and researchers. These more readily allowed for comparisons among diverse communities." Background Indicators "offer interesting background information that helps define the context in which sustainability initiatives take place. These are useful for both internal and external stakeholders."[23]

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[23] Fifty Year Vision and Indicators for a Sustainable Minneapolis, 2004, Ken Meter: Crossroads Resource Center, p

The 30 core indicators, listed below, were chosen because they link various issues, (particularly the three E's) and also reflect the groups' belief that the issues experienced by their citizens are interrelated and are experienced as systems.

Ecology-centered
1. Diversity of macro-invertebrate species (insects, etc.) in lakes, streams, and rivers.
2. Diversity of native fish populations in lakes, streams, and rivers.
3. Acres (and percentage) of permeable (absorbs rainfall) roof and soil surfaces.
4. Acres (and geographic balance) of leaf canopy in Minneapolis.
5. Acres of natural space in city that sustain natural ecological communities.
6. Percentage of Mississippi River gorge acreage with adequate understory vegetation.

Social connection- and social equity-centered
7. Transportation mode split (walking, bicycle, bus, light rail, car pool, single occupant vehicle) by percent.
8. Average time and distance of commute for (a) residents and (b) commuters into city.
9. Domestic abuse rates.
10. Percentage of babies born at adequate weight.
11. Infant mortality rates.
12. Reading test scores for third graders.
13. Achievement test scores (ACT/SAT) for high school juniors/seniors.
14. Graduation rate for students in Minneapolis Public Schools, by race.
15. Teen suicide rate.
16. Arrest, conviction and incarceration rates for males of color.
17. Number and percentage of gang-related homicides.
18. Health disparities involving STDs, diabetes, cardiovascular disease, obesity, HIV transmission, asthma, cancer (especially breast, cervical and prostate), by race/ethnicity/immigration.
19. Percentage of city residents who carry adequate health insurance.
20. Percentage of eligible voters who vote.
21. Number of people participating in faith-based neighborhood- and social-improvement initiatives for Minneapolis.
22. Percent of parents and students creating art through school and after-school programs.

Economy-centered
23. Percentage of workers earning a livable wage (at a single job).
24. Aggregate wealth created by residents in the lowest income quartile.
25. Percentage of Minnesota corporations with headquarters in Minneapolis.
26. Number of city residents employed in the Twin Cities region's manufacturing and service industry clusters (health, printing and publishing, food, computer technology, etc.).
27. Dollars invested in research and development and implementation of "three E's" sustainability by Twin Cities corporations (as percentage of gross revenue).
28. Percentage of renewable energy used in city (municipality, private sector, households).
29. Percentage of available housing units that are "green" and that are affordable to the lowest income quartile.
30. Percentage of housing units that meet or exceed USEPA Energy Star criteria.

City-driven

The sustainability indicators established by the City are also loosely grouped around the three E's. Instead of using the three E terminology the City's indicators three categories are entitled: A Healthy Life, Greenprint, and a Vital Community.

A Healthy Life
1. Healthy Infants
2. Teen Pregnancy
3. AIDS and Gonorrhea
4. Healthy Weight
5. Asthma
6. Lead Testing

GreenPrint
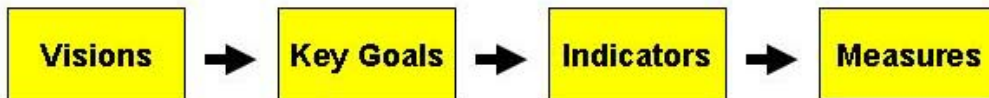9. Renewable Energy
10. Global Warming
11. Air Quality
12. Bicycle Lanes
13. Downtown Transportation Alternatives
14. Tree Canopy

15. Airport Noise
16. Combined Sewer Overflow
17. Permeable Surfaces
18. Water Quality

A Vital Community
19. Affordable Housing
20. Homelessness
21. Block Clubs
22. Brownfield Sites
23. Homicide
24. Students in the Arts
25. Graduation Rate
26. Workers Earn a Livable Wage

Assessment

The second annual report entitled, Minneapolis – Living Well, 2007 Sustainability Report is available for download on the City website. Although the report was difficult to find on the website, once it was located it was very easy to download. The report was user-friendly and driven to educate important decision makers: staff departments, city council, and citizens. The report takes one page to define the indicator and analyze the indicator trend. The same page also notes all actions that have been undertaken to address the indicator trend. This subsection is an effective tool to engage the media and public. The format charges the city to be accountable for its responsibility. According to a recent interview with State of Minnesota staff, the State believes the sustainability indicators being used in Minnesota are valuable in that they drive departmental goals.

Sustainable Cincinnati, 2005

Sustainable Cincinnati Coalition
Cincinnati, Ohio
http://www.sustainablecincinnati.org/
(513) 281-8683

Process

Sustainable Cincinnati is a sustainability indicator project that evolved from a discussion within the local League of Women Voters in 1999.[24] Interest on the significance of sustainability indicators led the League to set aside time during their monthly meetings to review other community indicator projects. They then decided to support the development of a regional indicators project.

A public forum was held in October 2000 to introduce the concept of sustainability based on the interconnection between the environment, economy, and social equity, to the community. Over fifty-five organizations, representing city government, county government, business, and non-profit organizations, signed a Sustainable Cincinnati Coalition agreement to signify their commitment to the project. This group is referred to as the Sustainable Cincinnati Coalition. Representatives from each of these organizations in the Coalition formed the project Steering Committee. A smaller Executive Committee was elected from the Steering Committee to administer the project. The Coalition received $60,000 in funding from three local foundations in 2001, which was used to hire a consultant and part time staff.[25] As the movement gained momentum additional member organizations, whose mission reflected the three E's (environment, economy, and social equity), were invited to join the Coalition. These invitations increased membership to 60 organizations. These 60 organizations consisted of local governments, non-profit groups, universities, area businesses, and faith-based groups and came from eight counties in the tri-state region (Ohio, Kentucky, and Indiana) region.

A PowerPoint presentation was designed with key information on sustainability and sustainability indicators. This presentation was then distributed to each of the 60 organizations so the information could be shared internally. In addition, the organization conducted public outreach by holding public meetings held throughout the eight county region. From 2001 to 2002 they held workshops and work sessions to select indicators. In 2002 the Sustainable Cincinnati Steering Committee approved the final 14 indicators. An Advisory Committee was also selected at this time to work with the Regional Planning Commission on updates to indicator data.

A 2002 report documented these 14 indicators. The mission of these indicators was to support a decision-making climate that addressed citizen needs of economic prosperity, quality of life, and

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[24] Profile References: *Sustainable Cincinnati*, (2005), Sustainable Cincinnati Coalition, Cincinnati, OH; Chris Moran, Member, Sustainable Cincinnati Coalition (and volunteer for Women League of Voters)
[25] The consultant was Maureen Hart—a nationally recognized authority on how to develop indicator projects.

healthy, functioning ecosystems. In 2005, a follow-up report updated data that was collected on the 14 indicators.

Indicators

The indicators are listed under four goal areas that correspond with the three E's of sustainability: environment, economy, and social equity. The following is a list of the four categories and fourteen corresponding indicators.

Economic Prosperity
1. Entrepreneurial spirit as measured by new business starts
2. Percent of workforce between 20 and 35 years of age
3. Cumulative percent of students who finish high school and are "work ready" or prepared for higher education
4. Percent of the eligible workforce earning enough to be self-sufficient

Healthy Ecosystems
5. Percent of land in the region devoted to people habitat, car habitat, wildlife habitat, and agriculture
6. Pounds of waste per capita sent to landfills or other disposal
7. Number of days that air quality is unhealthy based on national standards
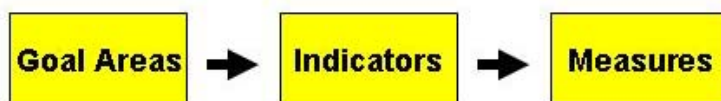8. Percent of stream miles meeting State water quality standards

Healthy People and Healthy Communities
9. Healthy People Index
10. Sense of Community measured by the social capital index
11. Violent crime rate in the region
12. Number of people using public transportation

…and Justice for All
13. Percent of population that feels treated with fairness and respect in public interactions
14. Racial and income segregation in the region measured by the Index of Dissimilarity

Assessment on each indicator is in the form of recent data (2002 going forward). Most indicators have one data source, or measure. For example, indicator #3: "Cumulative percent of students who finish high school and are "work ready" or prepared for higher education" is measured by the Percent of College Students Requiring Remedial Courses. Indicator #9 Healthy People Index takes into account 8 different measurements: rates of obesity, suicide rates, the infant mortality rate, the amount of adults who smoke, percent uninsured, the percentage of adults that were satisfied with their health service, rates of childhood asthma, and childhood lead poisoning.

Assessment

The Sustainable Cincinnati Coalition had hoped to publish a report (on average every 5 years) to monitor progress and trends for the sustainability indicators. There were also plans to develop additional indicators that address regional cooperation, housing and energy. Although the group would like to re-visit the project and continue to collect data, recent interviews revealed that several issues stand in the way. The League of Women Voters was the primary motivating organization behind the efforts, but based on the League's volunteer composition, there remains no central organization to coordinate, fund, and publish an indicators report. A significant portion of the data was derived from the U.S. Census, creating problems for 5 year updates. One of the challenges for the Sustainable Cincinnati Coalition has been finding high quality data to address indicators. Many of the indicators are only measured by Cincinnati data, or the Greater Cincinnati Area, which fall short of the regional goal of the plan.

Although the Regional Planning Commission (RPC) lists the indicators on their website, the RPC has had no further involvement with the project. The Sustainable Cincinnati Coalition is hesitant to hand the project over to the RPC because of the desire to keep it a grassroots effort. Although the departure from the project has been disappointing for the members, an advantage, but intangible success of the indicators is that they have encouraged collaborations among the different organizations that convened to work on the project.

Sustainable Cincinnati's website is still up and running. The content of the website is presented in a simple fashion yet user friendly, clear, and informative with the latest indicators report available on the home page (http://www.sustainablecincinnati.org/). The format of the report itself is accessible to the public in the sense that it is short (20 pages) and each indicator is concisely measured on one page with a balance of narrative and graphic data representations.

Central Texas Sustainability Indicators Project
The Central Texas Sustainability Indicators Project
Austin, Texas
http://www.centex-indicators.org/
(512) 223-7774

Process

The organization behind the Central Texas Sustainability Indicators Project (CTSIP) is also called the Central Texas Sustainability Indicators Project. The group is a volunteer organization comprised of "regional community leaders" (representing both the public and private sector) from five Central Texas Counties. CTSIP convened and the project began when these community leaders began to recognize the effects of the region's continued growth patterns.[26] The organization's vision for their role in managing the effects of growth was to assist the community in identifying areas of value and concern, but most importantly their vision included providing a central voice for the data necessary to educate Central Texas about the current state of their region and the progress made towards sustainability.
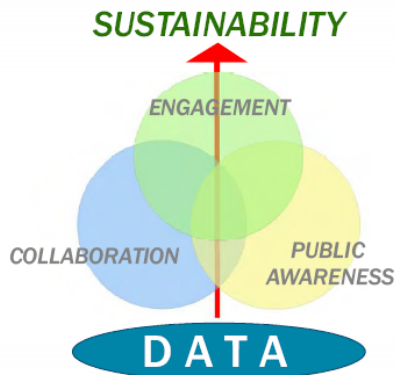
Since 2000, CTSIP has been providing an annual report on the "overall health of the Central Texas region."[27] The mission of CTSIP was to develop a common language for regional leaders and citizens that would illustrate relationships between variables that influence sustainability and have a positive effect on decision-making "…both to reverse worrying trends and to preserve regional accomplishments."[28]

Indicators

Although CTSIP's sustainable indicators are not clearly delineated into four overarching areas of concern, the "four E's" (equity, economy, environment, and engagement) are mentioned as the categories of focus. Engagement is a new area of concern not normally seen in other communities' reports. CTSIP's views the provision of data and measurement of the indicators in this report as setting the stage for a deeper engagement from both citizens and regional leaders.

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[26] Profile References: *2006 Biennial Data Report: Central Texas Sustainability Project* (2006), Central Texas Sustainability Indicator Project, Austin, TX; Jim Walker, Volunteer, Central Texas Sustainability Project

[28] The Central Sustainability Indicators Project (CTSIP), The Sustainability Indicators Project, p 6

There are (9) categories of sustainability indicators (demographic, public safety, education and children, social equity, engagement, economy, health, environment, and land use and mobility).

1. Demographic

2. Public Safety (3 Indicators)
Community Safety
Safe Families
Equity in Law Enforcement

3. Education and Children (6 Indicators)
Child Care - Access
Child Care - Quality
Schools - Quality
Schools - Equity in Education
Schools - Academic Performance
Higher Education

4. Social Equity (8 Indicators)
Cost of Living
Affordable Housing - Owner
Access to Home Loans
Affordable Housing - Renter
English Proficiency
Limited English Proficiency Students
Diversity of Leadership
Race Relations

5. Engagement (4 Indicators)
Philanthropy and Volunteerism
Participation in the Arts
Neighborliness
Civic Participation

6. Economy (8 Indicators)
Household Income
Diversity of Industries
Diversity of Employers
Exporting Industries
Labor Availability
Job Availability
Entrepreneurship
Technology Innovation

7. Health (3 Indicators)
Health Insurance Coverage
Health Status – Physical
Health Status - Mental

8. Environment (6 Indicators)
Water Consumption
Water Quality
Energy Use
Air Quality
Solid Waste
Hazardous Materials

9. Land Use and Mobility (6 Indicators)
Density of New Development
Rural Land
Public Open Space
Attractiveness of Landscape
Commuting
Vehicle Miles Traveled

CTSIP's annual report provides current data intended to measure each of the 9 indicator groups. There are three to eight tools used to measure each indicator. For example, the indicator Social Equity is measured by the following cost of living, affordable housing – ownership, affordable housing – rental, access to home loans, english proficiency, diversity of elected leadership, and race relations.

Assessment

CITSIPs website is well organized, engaging, and professionally designed. The latest (2006) report is available for download off the website (http://www.centex-indicators.org/annual_rept.html). In the report each indicator is dissected into the following sections: ideal state, current state, status and trend. Graphics and accompanying narrative are used to show "What's Happening" with each indicator and the "Connections" section answers the question of why the indicator is worth monitoring.

CTSIP creatively engaged the surrounding community in the assessment and analysis of the regional health of Central Texas by inviting (data-collecting) academic, government, nonprofit, and private-sector organizations to sponsor different sets of sustainability indicator chapters. This means, regional leaders, outside of the CTSIP board, are given discrete data-collecting tasks that remain consistent from report to report (year to year). The hard data provided by these community resources is supported by CTSIP's biennial survey of Central Texas residents. This survey illustrates citizen perceptions, which give qualitative balance to the quantitative data. The role of biennial report is a not to produce strategic solutions but rather to provide a tool to aid public officials, business leaders, and citizens in decision making.

CTSIP's website has a link which visitors can access in order to make suggestions for new sustainability indicators.

Southwestern Pennsylvania Regional Indicators Report

Sustainable Pittsburgh
Pittsburgh, Pennsylvania
http://www.sustainablepittsburgh.org
(412) 258-0100

Process

Sustainable Pittsburg published its first indicators report in 2002 as a means to move their six county, southwestern Pennsylvania region towards sustainability.[29] Having a regional vision was an important objective because sustainability issues are a regional problems and an organization of regional scope is a more influential player in the global economy. Sustainable Pittsburg started as a citizen initiative in 1998 and has since evolved into a non-profit which is "dedicated to accelerating the policy and practice of sustainable development in southwestern Pennsylvania."[30] They are currently run by a fourteen member board of directors. The organization is funded through donations, fundraising, and membership fees. Membership is open to all that wanted to be involved.

A group of citizens, who later became the Indictors Report Advisory Committee, informally started the indicators project in 1998 when they began hosting a series of community discussions on what sustainability means to the southwestern Pennsylvania region. From these discussions, they began to frame "a regional vision for sustainability and a set of common long-term goals."[31] They used Sustainable Seattle's method of obtaining public input as a model during the development of their project and therefore formed a civic panel of key area leaders. Over 250 community leaders ended up participating in a two month series of workshops in the spring of 1999. In these workshops, small groups discussed goals and their relationship to sustainability, which led to the formation of the indicator project's 21 goals. They also drafted an action plan for indicators and a list of potential indicators. The Advisory Committee decided on the final list of indicators, which was approved by the Sustainable Pittsburgh Board of Directors. The organization also utilized the expertise of Alan AtKisson—a well-known consultant who specializes in sustainability—and his method of indicator organization known as the "Compass of Sustainability."

The Advisory Committee then held a community meeting in each of the region's six counties in 2001 to get feedback on the draft. This action was important for Sustainable Pittsburgh because they wanted to ensure that their report truly reflected a regional vision. Sustainable Pittsburgh published its first indicators report in 2002 and its second in 2004. All citizens who participated in the development phase of the project for some length of time are called the "project team" by

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[29] References for profile: *Southwestern Pennsylvania Regional Indicators Report* (April 2002), Sustainable Pittsburgh, Pittsburgh, PA; *Southwestern Pennsylvania Regional Indicators Report* (April 2004), Sustainable Pittsburgh, Pittsburgh, PA. Sustainable Pittsburgh website, http://www.sustainablepittsburgh.org/

[30] "Mission," Sustainable Pittsburgh website, http://www.sustainablepittsburgh.org/

[31] *Southwestern Pennsylvania Regional Indicators Report* (April 2002), 8.

Sustainable Pittsburgh. A seven member Indicators Report Advisory Committee oversees the project. Both project reports received financial support from private foundations. The organization is currently working on a new report.

Indicators

Four major overarching goals guided the development of indicators:

1. Slowing, stopping and then reversing the increasingly inefficient and increasingly wasteful use of land and resources.
2. Build on the foundation of economic stability.
3. Invest in education, social engagement and social capital.
4. Look deeper into the factors that relate to high quality of life, to see if they are achieving them.

Each of these goals was simplified into areas—Nature, Economy, Society, Well-being—under which the 21 indicators fall. The indicators are listed below, followed by the metric used to evaluate it.

Nature

1. Air quality
2. Ecosystem health
3. Energy use
4. Environmental ethic
5. Land consumption
6. Toxic emissions
7. Waste & Recycling
8. Water quality

Economy

9. Cost of living
10. Housing
11. Mobility
12. Poverty
13. Unemployment
14. Wages

Society

15. Crime
16. Equity of political representation
17. Graduation rates
18. Internet access
19. Racial equity
20. Regional cooperation
21. Social Capital
22. Voting

Well Being

23. Health care access
24. Cultural life
25. General health
26. Infant Health
27. Mental Health
28. Recreational Opportunities

Vision → Goals → Goal Areas → Indicators → Measures

Assessment

Sustainable Pittsburg continues to monitor this project and is working on its next update. The organization planned on publishing an update every two years; however, they did not publish a report in 2006, but are instead waiting until 2008. As the project has evolved, they have continually held focus groups every few years to reinvigorate public interest. As a result, they have updated and changed some of the indicators. Some of the indicators have been in place now for about six years and are showing trends. The Board of Directors plans on increasing their list of indicators after the 2008 report. The future list of indicators will include access to health care,

continuing education, equity of opportunity, perception of social equity, recreational opportunity, regional cooperation and rich and vital cultural life. They also hope to hold additional focus groups to get public feedback to ensure they are not missing anything.

The ninety page report explains the indicator as well as the successes and failures the region is having with each indicator. A strong component of the report is that gives an equity analysis for each of the indicator readings. A limiting factor is the length of the report—61 pages are devoted to a discussion on each of the 28 indicator readings. Sustainable Pittsburgh also has a web site which explains the organization and their initiatives.

Sustainable Philadelphia: Clean and Green by 2016

Sustainable Philadelphia
Philadelphia, Pennsylvania
www.sustainablephiladlphia.com
(215) 299-1108

Process

Sustainable Philadelphia is a nonprofit organization which started in 2006 and is committed to creating a sustainable city with in ten years.[32] The organization believed this goal could be achieved by stimulating public interest through forums, creating and implementing sustainability indicators, and formulating a sustainability plan. The organization is a multi-stakeholder coalition which includes the following organizations: Academy of Natural Science, The PA Environmental Council, The Delaware Green Building Council, the Pennsylvania Horticultural Society, EPA and the Philadelphia Planning Commission. The organization is currently run by a steering committee, consisting of thirteen people from the collaborate organizations, whose main focus at this time is to run a forum that meets every month. The organization relied on the forums to serve as public education tools. Sustainable Philadelphia is both publicly and privately funded. They have received an EPA grant, but they also have held events to generate funds.

The first step Sustainable Philadelphia took to create a sustainability plan was to hold monthly Urban Sustainability Forums. Here they addressed key issues sustainability projects nationwide have responded to. The purpose of the forum was to stimulate public interest in the importance of a sustainability plan and to educate individuals and organizations about issues regarding sustainability. By design, the forums were public relation tools.

In order to help move the project forward, Sustainable Philadelphia contracted a graduate-level regional planning studio from Temple University in 2006 to draft a report which listed a variety of indicators that area organizations are already using to see trends that could serve as baseline data for future sustainability efforts. The findings from this research project should inform a future area plan, but at this time no plan has been finalized. The report includes a list of recommended indicators; however the report does not show results of indicators. All of the potential indicators listed in the report were derived from two organizations: Sustain Lane and Greene Guide.[33] Public input was not used when creating this list of indicators. However, Sustainable Philadelphia realizes that if they want the results from the indicator assessment to bear influence on local policy decisions, they will need the support of the public and will likely hold public workshops.

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[32] Profile references: *Sustainable Philadelphia—Clean & Green by 2016* (April 2006), written by graduate students in Temple University's Department of Community & Regional Planning; Sustainable Philadelphia website, http://www.sustainablephiladelphia.com/.
    [33] Sustain Lane is an on-line media company which is dedicated to promoting sustainable communities. Green Guide is an environmental resource and shopping guide uses indicators to rank cities sustainability level.

Indicators

The main goal of the indicators is to evaluate economical, environmental and social issues pressuring the city. However, the indicators are framed by these categories. The indicators are listed in terms of topics. Each topic has up to five metrics which determine how the individual topic is doing. The indicators that the city has started to use as a baseline are those that originated from Sustain Lane. These indicators are:

1. Transportation
2. Tap water quality
3. Air quality
4. The number of built or proposed LEED certified buildings
5. Solid waste diversion rate
6. Food/agriculture
7. Zoning
8. Land use
9. Planning
10. Energy/climate policy
11. City innovation
12. Natural disaster risk
13. Affordability
14. Economy
15. The knowledge base of the population.

They have also begun to use indicators developed by the Green Guide. These include:

1. Air quality
2. Green space
3. Green design
4. Transportation efficiency
5. Recycling
6. Water quality
7. Environmental policy
8. Public health
9. Current mayoral administration

Assessment

The indicators have already helped the committee identify the strengths and weaknesses of the city. The major problem they see with this list of indicators is that they do not mention neighborhood diversity or safety nor do they look at crime rates and other social issues. It is the hope of Sustainable Philadelphia that future revisions will add additional indicators. However, the indicators have allowed the organization to identify areas that need improvement and they are looking to put a plan together that will target these areas and make them more sustainable.

As of October 2007, Sustainable Philadelphia has not yet produced a plan but they have continued to hold forums. The Temple University report is included on the organization's website. The site also lists the topics for past and future forums and contact information. This is a fairly new project and it is hard to point out the successes and the failures.

Council Policy on Sustainability
City of Corvallis Department of Public Works
Corvallis, Oregon
www.ci.corvallis.or.us
(541) 754-1736

Process

Corvallis, Oregon's Department of Public Works created a sustainability committee from its own department in 2002 and charged them with drafting a plan that would make the city of Corvallis more sustainable through the use of indicators.[34] The committee, which fluctuated between two to five people, began their process by formulating a list of objectives that would eventually lead to the creation of new policies. The initial focus by the public works committee was on environmental protection, economic objectives and social justice. In the initial phases of the project they created four overriding objectives which were done to heighten awareness of sustainability and to have staff start thinking about how to implement sustainability projects.

1. Minimize or eliminate the use of non-renewable resources and fossil fuel
2. Minimize or eliminate the contamination of the natural environment from substances produced by society
3. Prevent degradation of the natural environment by physical means
4. Provide for a range of human needs in a fair and efficient manner

In 2004 the public works committee created a policy that focused staff efforts on six topic areas. The fact that the city council approved this policy says a lot to the city's commitment to the program. The policy requires annual reports to the city council on the progress in each topic area. The topic areas are:

o Sustainable purchasing practices
o Green buildings
o Solid waste management
o Land use planning
o Greenhouse gas emission
o Toxic and persistent biotoxins

They then hired a consultant called Zero Waste to conduct a sustainability assessment in 2005. Zero Waste looked at areas that the committee deemed most critical to achieving area sustainability. As a result Zero Waste came up with a list of goals and associated indicators to help the public works recognize achievements and failures.
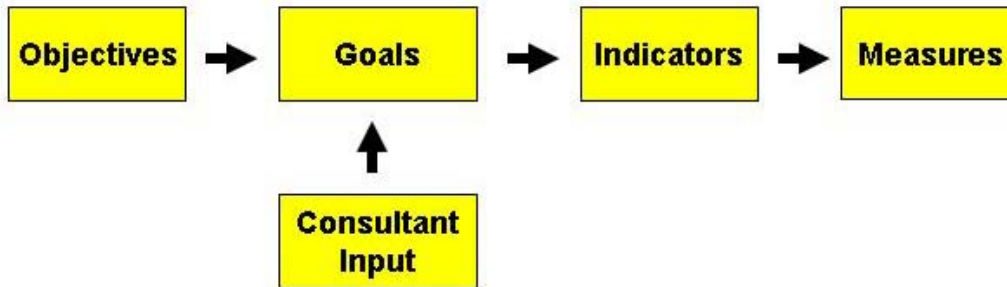
Indicators
After Zero Waste did their initial assessment they made created a list of sustainability indicators:

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[34] Profile references: *City of Corvallis—Phase 1 Report: Assessment of Sustainability Perfromance* (Dec. 2005), Zero Waste Alliance, Portland, OR; *City of Corvallis—Phase 2 Report: Sustainability Recommendations* (Dec. 2005), Zero Waste Alliance, Portland, OR; *2004, 2005, 2006 Annual Council Reports on Organizational Sustainability Practices*, Department of Public Works, City of Corvallis, Corvaillis, OR; City of Corvallis Department of Public Works Sustainability website, http://www.ci.corvallis.or.us/.

1. Reuse of materials
2. Energy consumption
3. Amount of hazardous chemicals
4. Amount of reuse practice
5. Land use planning

6. Amount of Green building practices
7. Amount of Green House gas emissions
8. Amount of Solid waste
9. Amount of toxic and persistent bio-toxins

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Objectives → Goals → Indicators → Measures
                ↑
          Consultant
            Input
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Assessment

When Zero Waste did their assessment they pinpointed four assets that they believed would enable the city to progress with its mission and allow the project to develop internal momentum. One: employees in all departments were excited and committed to sustainability. Two: the city council supported sustainability as one of its goals. Three: the city had demonstrated a willingness to take on more efforts pertaining to sustainability. Four: the city already had implemented a purchasing manual and had created a performance review system.

In 2005 they came out with an indicator report which gave the results from the assessment and provided recommendations for how the city should act to achieve sustainability. The plan included a list of five goals and gave suggestions on how to achieve them.

1. Building energy use guide
2. Economic Goals
3. Social Goals
4. Transportation energy use goals
5. Water use goals

Since the plan has come out not much has been done. It has created awareness within the Department of Public Works but its influence has not spread beyond it. The project and report can be found on the public works web site. The city has not attempted any public outreach with the project.

Potomac Index

Potomac Conference
Brookings Institute
Washington DC Region
http://www.brookings.edu/reports/2002/04washington_dc.aspx
(202) 797-6019

Process

The *Potomac Index* uses indicators to track key social, economic, and environmental trends in the Greater Washington D.C. region.[35] Its purpose is to increase awareness about changes confronting the region to inspire action by local citizens and area leaders. The *Index* was a joint project of the Potomac Conference and a research team led by the Brookings Greater Washington Research Program. The Potomac Conference is an annual leadership forum that brings together public, private, and non-profit executives to discuss regional quality of life issues. The conference has been sponsored by the Greater Washington Board of Trade since 1992. The Brookings Greater Washington Research Program is a division of the Brookings Institution, which is a nonprofit public policy research organization.

The *Index* dates back to the 1999 Potomac Conference during which area leaders discussed transforming their region into a "world-class connected community." The leaders at this a conference established five strategic commitments to achieving this vision: Innovation & Entrepreneurship, Inclusion & Participation, Education & Lifelong Learning, Quality of Life, and Regional Thinking & Action. Leaders at the 2000 Potomac Conference commissioned the first *Potomac Index.* At this conference, participants chose indicators that would measure progress toward meeting the five strategic commitments. The *2001 Potomac Index* immediately followed the *2000 Index* assessment with new indicators and refined measures. The *Index* received financial support from two high-profile corporations and several foundations. An advisory board of 11 members oversaw the *Index*, but the research, writing and production of the reports came from Brookings Institute staff. Unlike many of the indicator projects in this report, the *Index* was not developed with outside public input. Much of the data for the indicators, though, was based on 3 original surveys.

Indicators

Indicator data was collected through secondary sources and three surveys in November of 2001. It is interesting to note that several indicators, but not all, reflect the events of September 11 in terms of the economic and social effects on the region. The indicators correspond to the five priorities. The measures used to provide the indicator readings can be found within the body of the 2001 report.

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[35] Profile references: *2001 Potomac Index*, Potomac Conference, Washington D.C.; Greater Washington Board of Trade's Potomac Conference website, http://www.bot.org/shaping/potomacconference/.

Innovation and Entrepreneurship
1. Public-private sector job mix
2. Federal research and development contracting
3. Patents
4. Venture capital investments
5. Fast growth "gazelle" companies
6. Federal procurement of technology and professional services
7. Service sector earning advantage
8. Spending by non-profits

Inclusion and Participation
1. Household income distribution
2. Housing affordability and homeownership
3. Internet access
4. Minority business owner
5. Racial/ethnic diversity
6. Volunteering and philanthropic giving
7. Voter participation
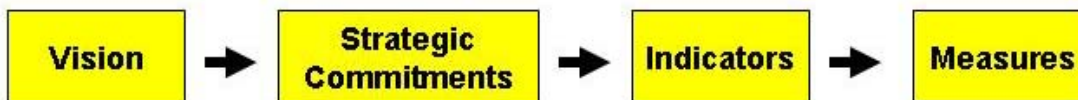
Education and Life Long Learning
1. High school drop out rates
2. K-12 technology capacity
3. Post-secondary education attainment
4. College and university enrollment and degrees conferred
5. Continuing education
6. College bound seniors

Quality of Life
1. Air quality
2. Water quality
3. Parks and open space
4. Land use, growth and density
5. Traffic congestion
6. Transit use
7. Violent crime rate
8. Participation in cultural arts

Regional Thinking and Acting
1. Shared regional identity
2. Rating the region as a place to live
3. Rating the effectiveness of the regions leadership in addressing regional problems
4. Interest in regional action on transportation issues
5. Local intergovernmental cooperation

Vision → Strategic Commitments → Indicators → Measures

Assessment

The report talks optimistically about the findings of the *Index*, however, neither the Potomac Conference nor the Brookings Institute allocated resources to produce another report after the *2001 Index* was published. The Conference shifted focus and tackled another topic the next year. For that reason, sponsors did not make much of an effort to publicize the results of the report or push for changes due to the results of the assessment. The Potomac Conference, though, has continued to discuss quality of life issues that relate to sustainability. The 2007 Potomac Conference topic is "Green as a Competitive Advantage." As the press release for the Conference asserts "reducing greenhouse gases, improving air quality and enhancing environmental stewardship are essential to long term economic competitivness and improved quality of life."

The *2001 Potomac Index* can be found on the Brookings Institute website, but it is not prominently featured. The engaging report focuses on the five strategic commitments and describes the importance of each individual indicator reading to achieving the vision for each commitment. The color-coded layout and intriguing graphics make this report a good example for PVPC to consider when formatting their indicator results.

Indicators for a Sustainable Community

Sustainable Seattle
Seattle Washington
www.sustainableseattle.org
(206) 622-3522

Process

Sustainable Seattle initiated what is widely considered to be a model sustainability indicators program in 1992 and published its first indicators report in 1993.[36] The indicators project grew out of an initiative led by the Sustainable Seattle Network in 1991 to help make the region more economically, environmentally, and socially sustainable. This group soon became Sustainable Seattle—a non-profit organization comprised of paid staff, board of trustees, advisory council, and a citizen network.

Developing indicators to measure regional progress became the organization's main focus. The following sequence explains the process the organization used to establish the indicators program and produce their first report.

- Established a Task Team
- Task Team gathered ideas and researched potential indicators.
- Task Team formulated a draft list of key, secondary, and provocative potential indicators.
- Board of Trustees met to define the network's identity and create an organizational structure
- Task Team formed a "civic panel" of key area leaders who had a background in 10 predefined topic areas. The Task Team mailed potential participants an invitation and then personally followed this invitation with a phone call.
- Task Team trained volunteers to facilitate workshop sessions.
- Task Team held 4 participatory workshop sessions over the course of 6 months where civic panelists met to envision what a sustainable society would look like and decide what measures would indicate progress toward that vision.
  - Workshop 1: general orientation and participants received a draft copy of potential indicators list.
  - Workshop 2: panelists divided into 10 topic groups so a list of ten potential indicators for each topic area could be more easily accomplished.
  - Workshop 3: Each topic group tried to narrow the list of ten potential indicators for each topic area to 3 or 5; however, many topic groups were not able to agree on a more narrowed selection and thus expanded the number for their topic. 99 indicators resulted from this workshop.

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[36] Profile References: *Indicators of Sustainable Community* (1998), Sustainable Seattle, Seattle, WA; "Regional Sustainability Information Commons—Concept," Sustainable Seattle, Seattle, WA; Central Puget Sound Regional Sustainability Indicator Commons, Sustainable Seattle website,
http://www.sustainableseattle.org/Programs/RegionalIndicators/IndUpdate

- o Workshop 4: Panelists each selected fifteen indicators that they felt provided the best "snapshot of community sustainability." Panelists broke into small groups to strategize methods for ensuring that the indicator readings would be utilized to influence area decision making.
    - ➔ Over 150 people consistently attended this 6 month workshop series.
    - ➔ Sustainable Seattle believes that the Civic Panel was invaluable to the development of the project because of how it engaged key area leaders.
- Task Team worked on narrowing the list of 99 potential indicators to 40 based on the input from Workshop 4.
- Task Team mailed the final draft of 40 indicators to all Civic Panel members for one last review and comment.
- Task Team and some Civic Panel members began finding and collecting data for the first report.

Sustainable Seattle published the first report in 1993. A second and third report followed in 1995 and 1998, all of which received financial support from area foundations. Although the 1998 report indicated that the next report would be published in 2002, the organization reassessed the indicator program after the 1998 report publication and decided to rebuild the program in order to place greater emphasis on strategies for action. Sustainable Seattle's new indicators program is supposed have its first report ready by the end of 2007.

Indicators

Sustainable Seattle came up with a list of characteristics that make good indicators. These were derived from the public meetings and focus groups. These characteristics include relevance, reflection of community values, attractiveness to local media, statistically measurable, logically or scientifically defensible, reliable, leading, and policy-relevant. The indicators, which were last updated in 1998, are divided into five categories which include environment, population and resource, economy, youth and education, and health and community. These were the categories that the general public values fell into.

Environment
1. Wild Salmon
2. Ecological health
3. Soil erosion
4. Air quality
5. Pedestrian and bicycle friendly streets
6. Open space near urban villages
7. Impervious surfaces

Population and Resource
1. Population
2. Water consumption
3. Solid waste generated and recycled
4. Pollution prevention
5. Local farm production
6. Vehicle miles traveled and fuel consumption
7. Renewable and non-renewable energy use

Economy
1. Energy use per dollar of income
2. Employment concentration
3. Unemployment
4. Distribution of personal income
5. Health care expenditures
6. Work required for basic needs
7. Housing affordability
8. Children living in poverty
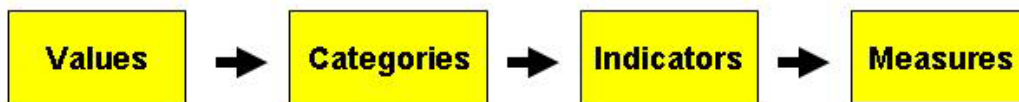9. Emergency room use for non-emergency room purposes
10. Community reinvestment

Youth and Education
1. High school graduation
2. Ethnic diversity of teachers
3. Arts instruction
4. Volunteer involvement in schools

5. Juvenile crime
6. Youth involvement in community services
7. Equity injustice
8. Adult literacy

Health and Community
1. Low birthrate infants
2. Asthma hospitalization for children
3. Voter participation
4. Library and community center usage
5. Public participation in the arts
6. Gardening activities
7. Neighborliness
8. Perceived quality of life

Values → Categories → Indicators → Measures

Assessment

The organization considered the original indicator program to be successful in the sense that it showed achievements while also highlighting areas that needed improvement. A survey of over 170 sustainability projects nationwide found that at least 90 of them used Sustainable Seattle's model. Sustainable Seattle's website indicates that the organization kept busy with projects designed to enhance the region's sustainability despite the demise of the original indicators program. After 1998, the organization worked on rebuilding and also focused on neighborhood level initiatives. In addition, they became interested in developing indicators at the neighborhood level as well as those at the regional level. The organization started an outstanding leadership awards program in 2001. That same year the organization was awarded a grant to measure quality of life at the neighborhood scale. Sustainable Seattle web site explains these new initiatives.

In 2004, Sustainable Seattle began to reinvigorate the indicators project with the creation of a new 24 member steering committee. The committee developed goals, principles, and an overall framework for the new project. They then held a Civic Forum during which 100 civic leaders met to discuss regional assets and areas of concern. Participants also prioritized a preliminary list of 70 indicators. After the inaugural Civic Forum, four mini-panels were held to make sure the project reflected "a wide diversity of views and priorities of the region."[37] An 8 member Technical Advisory group developed a framework to refine the indicator list. The Sustainable Seattle staff and steering committee developed the final draft list, which was then submitted to the participating civic leaders and members of the Technical Advisory group for review. Sustainable Seattle Board of Directors had the final approval. A component of the new indicators project also entailed the development of a network of key leaders. The new report is supposed to be completed by the end of 2007.

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[37] "Progress Toward a Sustainable Future," Sustainable Seattle website, http://www.sustainableseattle.org/Programs/RegionalIndicators/index_html

Sustainable Regional Initiative: Sustainability Report

Metro Vancouver (Greater Vancouver Regional District)
Vancouver, British Columbia
www.gvrd.bc.ca/sustainability
(604) 451-6075

Process

Metro Vancouver, formerly known as the Greater Vancouver Regional District (GVRD), is a government-sponsored regional planning organization that established a management framework that includes indicators in 2001 known as the Sustainable Region Initiative (SRI) to guide efforts toward achieving regional sustainability.[38] The SRI is now the overarching framework for all Metro Vancouver activities, which commits Metro Vancouver to do the following:

- o Re-examine and adapt its corporate (internal) practices to reflect sustainable principles.
- o Review and coordinate all regional and business plans to reflect sustainable principles.
- o Reach out and build a network of partners to foster a region-wide commitment for sustainability.

The beginnings of the SRI can be traced back to 2001 when Metro Vancouver decided to review their Livable Region Strategic Plan and subsequently found that their organization could be doing more to affect sustainability within the region. This led them to create the SRI, modeled on the principles and framework of the Global Reporting Initiative's Sustainability Reporting Guidelines for public sector organizations. Unlike several of the indicator projects analyzed in this report, Metro Vancouver did not directly solicit public input for SRI. Public participation influenced the development and direction of the program through membership on Metro Vancouver's board of directors and numerous committees and commissions. The organization has in place a "Partners Committee" (similar to a steering committee) that oversees the Initiative, which includes public outreach to key organizations.

The organization's first two reports (2002, 2003) focused on Metro Vancouver's ability to meet its sustainability goals in ten performance categories using indicators:

- o Community
- o Economic
- o Land
- o Air
- o Water
- o Liquid waste
- o Solid waste
- o Energy
- o Transportation
- o Security and Emergency Management

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[38] Profile references: *2002 Sustainability Report, 2003 Sustainability Report, 2003-2005 Sustainability Report*, Metro Vancouver, Vancouver, BC; Sustainable Regional Initiative, Metro Vancouver website, http://www.gvrd.bc.ca/sustainability/default.asp

An internal focus was important to Metro Vancouver because it believed that their organization should practice what it preached if they were to be truly committed to helping the region make sustainable decisions. After the 2003 publication, the organization decided to review the Initiative. They were not completely satisfied with their own performance nor their level of advocacy in the region. They felt that the SRI could be doing more. For this reason, the organization decided to focus attention on "key achievements and challenges rather than providing an overview of all of our functional responsibilities" for the reports.[39] They also decided to publish a report every three years, which would align itself to the organization's own triennial membership changes.

Indicators

Metro Vancouver uses 33 indicators in the 2003-2005 report to provide a picture of sustainability in the greater Vancouver region and within the organization itself. They refer to these 33 indicators as "performance measures," which are divided into a regional and corporate category. The regional indicators target regional performance while corporate indicators continue to target Metro Vancouver itself. Each indicator includes up to three measurement readings. Trend data from the 33 indicators informs the discussion on regional and corporate performance in areas of: water, waste, air, energy, land, density, transportation, housing, economic performance, public education, and health and safety. The organization acknowledges that the performance indicators will be updated and refined as needed.
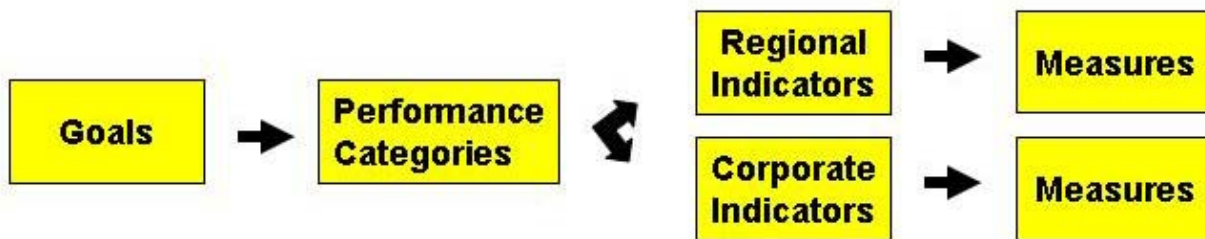
Corporate
1. Water quality
2. Water main leaks and breaks or interruptions to service
3. Treated wastewater quality
4. Sewer incidents
5. Visitors to parks and Lower Seymour Conservation Reserve
6. GVHC housing
7. Public education
8. Corporate energy consumption
9. Corporate co-generation
10. Green power purchases
11. Facility CAC and other emissions
12. Paper purchases
13. Injuries and Days lost due to injury
14. WCB merit discount
15. Training and development
16. Staff turnover
17. Average days absent
18. Work stop pages
19. Financial statements
20. Awards

Regional
1. Ranking in the Mercer Quality of Life survey
2. Ecological footprint
3. Total storage for Metro Vancouver usage

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[39] Sustainable Regional Initiative, Metro Vancouver website, http://www.gvrd.bc.ca/sustainability/default.asp

4. Annual biochemical oxygen demand and suspended solids discharge
5. Biosolids production and use/disposal
6. Solid waste flows
7. Exceedances of Metro Vancouver air quality objectives
8. Regional energy consumption
9. Transportation
10. Publicly protected regional green space
11. Housing stats by structural type
12. Regional housing
13. Economic activity highlights

Assessment

Metro Vancouver still uses indicators to assess the performance of region and their organization. The most recent 2003-2005 report noted that Metro Vancouver was making progress towards reaching their sustainability goals. The triennial report will next be published in 2008. In the mean time, the organization is following the management framework established by the SRI and continues to work with the twenty-one municipalities under their purview as well as area non-profits and businesses to enhance regional sustainability. An example of such an effort is the Sustainability Enterprise Fund, which Metro Vancouver established to provide up to $125,000 per year for the implementation of innovative, sustainable municipal projects.

The organization's website, in terms of its structure and content, would be a useful model for PVPC to reference. It highlights Metro Vancouver's efforts towards increasing awareness on sustainable practices as well as its ongoing actions. It includes all types of information about the organization, projects occurring in the region, a list of services, press releases, their sustainability plan, and sustainability reports. The 2003-2005 itself could also be a useful model. The organization purposefully relegated indicator data to the back of the report called "Vital Signs" in order to make the overall report more "readable and impressionistic." The 2003-2004 report, instead, emphasizes broader, regional assessments includes stories that vividly showcase the need for increased awareness or highlight exemplary practices.