

**THINKING GLOBALLY, ACTING LOCALLY: THE ROLE OF
CITIES IN SUSTAINABLE DEVELOPMENT—A CASE STUDY
OF THE CITY OF SEATTLE**

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ABSTRACT

Much of the existing literature on sustainable development focuses on the role of business rather than government. The private sector is seen as the primary culprit behind widespread pollution and the depletion of the earth's resources. The role of government in the path to sustainable development is viewed primarily in terms of its policy-making role and the tools through which policy is implemented, e.g., laws, regulations, tax policy, investment in research and development, subsidies, programs, and services. This has tended to obscure two other key roles it plays. These two roles have to do with management of its internal operations and its influence on the decisions of other governmental bodies. Until recently, the importance of local government in achieving a sustainable society has been overlooked. As awareness of the scope of social, economic, and environmental problems challenging our country grows, there has been renewed interest in the role of city and county government. Cities and counties provide the battlefields for innumerable conflicts between development and conservation interests. As cities continue to grow, it will be increasingly difficult for local government to address social concerns, maintain viable economies, and protect local ecosystems. The City of Seattle is typical of many progressive cities in its interest in environmental stewardship and sustainable development. Seattle has been recognized for its leadership in fostering environmental stewardship in the community. But prior to 1996, the attention paid to the "ecological footprint" of its own operations was minimal. The obstacles are similar to those faced by private corporations. The city's central mission is about service delivery not environmental protection. In taking a first step toward addressing environmental sustainability in city operations, a two-year initiative was launched to develop a comprehensive environmental management system. This program was intended to establish internal environmental policies and standards, and ensure that all departments bring their operations into conformance. The three key components of the program are its policies, management structure, and performance measurement system. Implementation of Seattle's environmental management program will provide a solid foundation for expansion into the other arenas of sustainable development. The next steps are the most critical because the city must move beyond the words on paper to action. Unfortunately, this is the phase where most cities fail. Grand plans are prepared and adopted with much fanfare and things pretty much stop there. Implementation turns out to be just too expensive and too complicated. Without implementing programs and gaining a deeper understanding of what the commitment to environmental sustainability entails, it is unlikely that local government will be successful in leading change in their communities. Seattle has done many things right so far. But the stakes for its future success are very high.

Introduction

Much of the existing literature on sustainable development focuses on the role of business rather than government. The private sector is seen as the primary culprit behind widespread pollution and the depletion of the earth's resources. Those that view business as the cause of environmental problems, also tend to view it as the solution. Numerous books and case studies of companies track their progress from initial commitments to pollution prevention and eco-efficiency,¹ eventually progressing to a corporate commitment to financial, ecological, and social sustainability.²

The role of government in the path to sustainable development is viewed primarily in terms of its policy-making role and the tools through which policy is implemented, e.g., laws, regulations, tax policy, investment in research and development, subsidies, programs, and services. We especially tend to focus on the federal government's role because of its primacy, especially in areas of taxation, law making, and investments. In addition, it represents the nation in international forums on global environmental issues such as climate change.

The attention paid governmental responsibilities with respect to policy-making and service delivery has tended to obscure two other key roles it has in furthering sustainable development. These two roles have to do with management of its internal operations and its influence on the decisions of other governmental bodies.

While many hold a stereotype that government consists largely of faceless bureaucrats working behind gray metal desks, the impact of the public sector's activities on the environment is significant. From an economic perspective, the government's consumption, expenditures, and investments represent 17.5% of the GDP. In carrying out its mission, the public sector consumes vast quantities of resources in the form of office products, vehicles, energy, facilities, equipment, etc. A significant portion of government expenditures involves investment in infrastructure and capital facilities, e.g., roads, bridges, fire and police stations. Such projects have direct impacts on the earth's landscape and influence future patterns of growth. Opportunities and returns for increasing the eco-efficiency and reducing the waste of governmental operations are enormous.

Role of Local Government

Until recently, the importance of local government in achieving a sustainable society has been overlooked. As awareness of the scope of social, economic, and environmental problems challenging our country grows, there has been renewed interest in the role of city and county government. Local government has significant potential to influence the thinking of businesses

¹ Stephan Schmidheiny and Federico Zorraquin define eco-efficiency as "a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and corporate change management maximize value added while minimizing resource consumption, waste, and pollution. From *Financing Change*, Cambridge, MA: MIT Press, 1998, p. 17.

² For examples, see Carl Frankel, *In Earth's Company*, Gabriola Island, B.C.: New Society Publishers, 1998, and Brian Nattrass and Mary Altomare, *The Natural Step for Business*, Gabriola Island, B.C.: New Society Publishers, 1999.

and residents, and, in turn, reflects the social and environmental values of the community it serves. The environmental, economic, and social issues with which most people concern themselves are those that impact them, their families, or their neighbors directly. And, many of the decisions that affect citizens and the environment occur at the local level. Most citizens feel much more able to influence local decisions than they do the decisions of the Congress or President.

Cities and counties provide the battlefields for innumerable conflicts between development and conservation interests. Local government is the arena in which decisions are made about conversion of agricultural lands to subdivisions; about conversion of wetlands to marinas; about construction of factories and housing developments; about investments in streets, bicycle paths, and mass transportation; and about collection and disposal of the waste generated by homes and businesses. It is local government that has to deal with the reality of homeless people sleeping on its streets and youth gangs. As cities continue to grow, it will be increasingly difficult for local government to address social concerns, maintain viable economies, and protect local ecosystems.

As increasing attention is being focused on cities, two terms have become part of the sustainability lexicon--smart growth and sustainable communities. Local government is seen as playing a central role in both these endeavors.

City of Seattle

Background

The City of Seattle is typical of many progressive cities in its interest in environmental stewardship and sustainable development.³ Seattle has been recognized for its leadership in fostering environmental stewardship in the community. It has been a leader in offering curbside recycling pick-up for residents, energy and water conservation services for residents and businesses, and in its protection of natural resources affected by electric and water utility operations.

Even though Seattle views itself as an environmental leader, prior to 1996, the attention paid to the "ecological footprint"⁴ of its own operations was minimal. The obstacles are similar to those faced by private corporations. The city's central mission is about service delivery not environmental protection. Most top managers view environmental issues as peripheral to their main areas of responsibility. Budgeting and decision-making processes do not support investments with long paybacks. Members of its Board of Directors (the City Council) and the CEO (the Mayor) may not care deeply about environmental concerns, and even if they do, their

³ The discussion of Seattle's programs will focus on the environmental "leg" of the sustainability triad. In comparison to the private sector, most large cities are fairly advanced in their social policies and programs.

⁴ An ecological footprint is an accounting tool for ecological resources such as food supply and absorption of waste products. Categories of human consumption are translated into areas of productive land required to provide for food, housing, transport, goods and services. It is a tool that allows an organization to calculate its rate of consumption of the earth's resources and determine its efficiency and also whether it is using more than its fair share. See Mathis Wackernagel and William Rees, *Our Ecological Footprint*, Gabriola Island, B.C.: New Society Publishers, 1996

time is frequently occupied by more pressing issues such as crime and potholes. Many of the environmental costs of doing business are hidden. Most environmental issues are addressed in a reactive, not proactive way, i.e., when a problem is discovered. Environmental managers and staff tend to be several levels down and do not have significant policy-making roles.

Unlike many private corporations, there are few incentives (beyond those provided by state and federal regulations) for Seattle to be eco-efficient. First of all it is a monopoly. There is little competition for most of the services it provides unless the city chooses to subject itself to this. The budgeting process provides incentives to spend but not to save. Department directors who underspend their budgets can look forward to a budget reduction in the next cycle. Seattle is similar to most other governmental agencies in being slow to develop comprehensive performance metrics or to provide incentive-based compensation for its employees.

The motivation for Seattle's decision to embark on a serious review of its own ecological footprint came from one of its Council members, Margaret Pageler. She felt the city could do much more in improving standards for the city's own operations. Equally important, she felt the city's credibility as a proponent of environmental stewardship and sustainability in the community would be compromised if its actions did not match its words. And, she was aware that there were several areas where significant gaps existed between its policies and its practices. For example, the city had invested hundreds of millions of dollars over the past 15 years in promoting and subsidizing investments in energy and water efficiency in local homes and businesses. Yet, similar investments to improve the efficiency of the city-owned facilities had not been made. Seattle regulates construction within its borders to make sure that codes are followed and that environmental impacts are minimized. However, actions by the city's field crews working on city-sponsored projects did not consistently meet the standards set for private developers.

This situation was not surprising. Day to day decisions about internal environmental standards were made at the department head level with limited guidance from the Mayor and City Council in the form of written policies or goals. Further, the nature of many city jobs and functions results in competing priorities for employees and contractors, potentially biasing workers towards quick solutions rather than alternatives that have longer term benefits.

These factors resulted in each department making its own decisions about the emphasis to place on environmental stewardship. Some city departments had committed to a high level of environmental protection while others did not have this as a priority. Expectations about environmental responsibility were unclear, resulting in gaps in performance, inefficiency in utilization of resources, and lack of a unified strategy for managing the city's environmental responsibilities. The level of budgetary support for environmental initiatives also affected environmental performance in some departments.

The City of Seattle is a large corporation. It has about 10,000 permanent employees. It owns several hundred facilities, and approximately 7,000 acres of land within the city and over 128,000 acres elsewhere in the state. The city operates major industrial facilities in three Washington counties; these facilities are associated primarily with the operation of its electric

and water utilities. Its revenues average about \$2 billion per year. Its capital improvement budget for 1999 is in excess of \$400 million.

The city covers an 84 square mile area and serves a population of about 540,000. Its primary functions include:

- Police and fire services
- Land use planning and regulation of construction
- Parks, open space, and recreational services
- Municipal court
- Utility services including electricity, water, drainage and wastewater, and solid waste
- Housing and human services for low income families
- Libraries
- Road and bridge maintenance and traffic control

The environmental aspects of city operations range from use of chemicals and pesticides to impacts on habitats resulting from construction activities.

Seattle's Environmental Management Program

In taking a first step toward addressing environmental sustainability in city operations, a two-year initiative was launched to develop a comprehensive environmental management program. This program was intended to establish internal environmental policies and standards and ensure that all departments bring their operations into conformance. The city decided to use the ISO 14001 standard as a guide for its program. However, it used the standard in a manner that differs from the typical approach. Rather than developing a specific environmental management system (EMS) for each facility, Seattle employed a two-tiered, phased approach. In the first phase, a general assessment of environmental aspects and legal requirements for all city operations was performed. This assessment provided the basis for development of citywide environmental policies and performance metrics, and improvement of the management structure. With the citywide EMS framework in place, individual departments are expected to develop their own, more detailed EMS's to implement the new standards. The complexity of department-level EMS's will vary according to the range and significance of environmental aspects.

The three key components of the city's environmental management program are its policies, management structure, and performance measurement system.

Environmental Policies. In addition to the required statement of environmental policies and principles, Seattle's environmental management program includes 13 issue-specific policies and procedures that outline in more detail the expectations of department managers for their operations. These policies address the following topics:

- Compliance assessment
- Management of hazardous wastes
- Use of chemicals
- Hazard communication to employees
- Handling of waste dumped on city property
- Property transactions

- Operation of petroleum storage tanks
- Environmental impact analysis of city projects
- Energy and water conservation
- Waste reduction and recycling
- Management of grounds and landscapes
- Environmentally responsible purchasing
- Management of city fleet vehicles

Sections on sustainable building, emergency response, employee training, and construction practices will be added in the next two years.

Management Structure. The city determined that its current management structure was not adequate to implement the new EMS. The city did not have a central or corporate environmental unit. Some individual city departments with significant regulatory exposure had professional staff to manage their environmental affairs. The Mayor and City Council decided that a new, small "corporate" environmental office would be needed to assist departments in implementing the new program and to provide a focal point for environmental issues. A four person Office of Environmental Management was established in January 1999 to be responsible for developing environmental policies and strategies, setting priorities, and improving collaboration among departments. This group is also responsible for reporting to elected officials and to the community on the city's environmental performance.

In addition, an Environmental Oversight Committee consisting of elected officials, key department directors, and representatives of community groups was established to conduct the management review of the program as required by ISO 14001. In addition, the responsibilities of interdepartmental teams were strengthened so that environmental issues that were common to more than one department (e.g., disposal of hazardous waste) could be managed cooperatively.

Environmental Performance Measurement. Perhaps the most important aspect of Seattle's environmental management program is its measurement system. Environmental indicators and targets serve as an organization's feedback loop, indicating the effectiveness of actions and programs in achieving its objectives. Environmental indicators also serve as a way to communicate information to stakeholders about the city's progress. This data is potentially far more powerful in motivating change in the public sector than in private corporations. While some shareholders and environmental groups may study a corporation's environmental report, it is unlikely to receive much attention unless it contains unexpected data.

Much of the opinion that Seattle's citizens hold of their government is formed by media coverage. If Seattle misses a stated environmental target or trends are in the wrong direction, this is likely to receive prominent play in the daily newspaper. The city's board of directors is its City Council and its CEO is the Mayor, all elected at large. These decision-makers hear regularly from their constituents. Since public officials work in a fishbowl, many of the issues and priorities for city business tend to be initiated from outside the organization. In contrast, it is unlikely that private corporate boards have much day to day communication with shareholders giving them feedback on the company's environmental performance.

Seattle followed the guidance in ISO 14031 in crafting its system of environmental performance evaluation. This guidance document classifies environmental indicators into two categories:

- Environmental Condition Indicators (ECIs)
- Environmental Performance Indicators (EPIs)

Environmental condition indicators (ECIs) relate to local, regional, or global measures regarding the condition of the environment. Measures of ambient air quality are an example.

Environmental performance indicators (EPIs) relate to the organization's activities and outputs that can affect ECIs. Air emissions from the City's fleet vehicles are an example.

In selecting Environmental Performance Indicators (EPIs) to monitor the effectiveness of the environmental management program, the city considered several factors:

- Is it of interest and relevance to key stakeholders of Seattle, e.g., employees, citizens, elected officials?
- Is it relatively easy to measure and collect?
- Is it easy to understand?
- Does it have the potential for cost savings to the city?
- Will it be broadly applicable across city departments?

The EPIs selected by the city are shown in the following table. For most of the indicators, the city will start by measuring trends. After a baseline has been established, this data will be evaluated annually to assess whether the trends are in the expected direction. Specific targets were set only for measures of regulatory compliance and use of fuel by fleet vehicles. Results will be reviewed annually by the city's Environmental Oversight Panel.

Seattle's Environmental Performance Metrics

Environmental Objectives	Environmental Performance Indicators	Measures
Comply with regulations	Number of fines, violations and releases	Zero violations or fines Zero uncontrolled releases
Reduce pollution at the source Reduce consumption of resources	Number of active chemical products in inventory as measured by MSDSs Number of chemical products phased out	Trend: down for MSDSs Trend: up for products phased out
Reduce pollution at the source Reduce consumption of resources	Pounds of hazardous waste generated Cost to dispose of hazardous waste Tons of solid waste generated Tons of waste recycled	Trend: down Trend: down Trend: down Trend: up
Reduce consumption of resources	Reams of paper purchased Use of environmental preferable products Energy used in City facilities Water used in City facilities	Trend: down Trend: up Trend: down Trend:down
Reduce consumption of resources	Energy used by City fleet vehicles (gasoline, diesel, and CNG)	Reduce fuel use by 5% by year 2005

Results

In the two years since the program started, significant progress has been made in a number of areas. Grounds management employees from seven departments have worked together to develop landscape guidelines. These guidelines provide a framework for improved environmental stewardship in how the city designs, constructs, and manages the several thousand acres it owns in parklands, rights of way, and other landscaped areas.

The city has completed its first comprehensive inventory of all the chemicals it uses. This information will provide the basis for implementing a program to phase out use of the most toxic products and reduce the overall number of products in its inventory. As in the grounds management work, a team of staff from multiple departments is coordinating this project.

Beginning in 1996, the city began to address the efficiency of its own facilities. To date, it has invested \$2.2 million in retrofits to reduce energy use, resulting in savings of 5.9 million-kilowatt hours. Plans for large, new facilities now include a comprehensive assessment of the opportunities for resource efficiency in the design of the facility and selection of materials.

Conclusion

Implementation of Seattle's environmental management program will provide a solid foundation for expansion into other arenas of sustainable development. The next steps are the most critical because the city must move beyond the words on paper to action. It is during this phase that the complexity of the issues is confronted. New systems must be designed and implemented to allow change to occur, e.g., modifications to purchasing and financial management systems. Communication to employees must be continuously reinforced and assistance must be available. More accountability for environmental results must occur.

Unfortunately, this is the phase where most cities fail. Grand plans are prepared and adopted with much fanfare and things pretty much stop there. Elected officials move on to other issues, and department managers have more added to their already full plates. Implementation turns out to be just too expensive and too complicated. The inertia of the bureaucracy wins out.

Without implementing programs and gaining a deeper understanding of what the commitment to environmental sustainability entails, it is unlikely that local government will be successful in leading change in their communities. First of all, they will be extremely vulnerable to accusations of hypocrisy. Furthermore, they will have gained little practical experience in managing the kinds of changes that will be required if we are to achieve sustainable communities. Seattle has done many things right so far. But the stakes for its future success are very high.