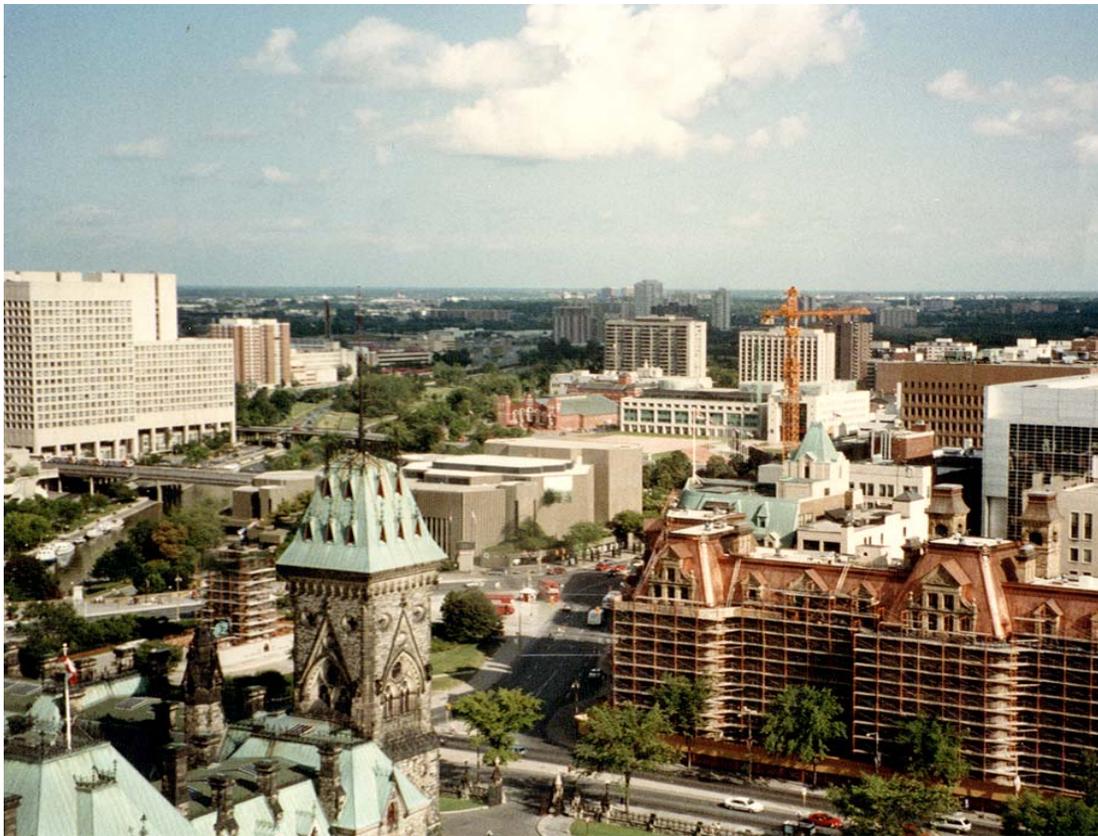


The Environmental Assessment and Planning in Ontario Project

Case Report No. 5

Sustainability Assessment and the Ottawa 20/20 Growth Management Strategy

by
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The Environmental Assessment and Planning in Ontario Project

Problems have arisen at the intersection of environmental assessment and land use planning in Ontario for two main reasons. Established land use planning practices have failed to satisfy growing environmental concerns about individual undertakings and, more importantly, their cumulative effects. At the same time, environmental assessment, which has evolved into an approach to planning that requires greater environmental sensitivity, now both overlaps inefficiently with some land use planning decisions, and is in some ways attractive for broader application in planning decision making.

These two factors have led to two quite different, but perhaps ultimately complementary pressures for reform. The first is to apply environmental assessment requirements more broadly in land use planning decision making. The second is to provide for a more efficient rationalization of processes in the relatively small area where environmental assessment and land use planning requirements already overlap.

The Environmental Assessment and Planning Project, initially funded by the Social Sciences and Humanities Research Council of Canada, aims to develop a better understanding of the existing problems and the needs and options for reform. The work completed thus far includes case studies of major controversies and responses to these controversies in Ontario and British Columbia. *Sustainability Assessment and the Ottawa 20/20 Growth Management Strategy* is the case report of one of these studies. For other case studies and publications of the project, contact the project coordinator and general editor of the case study series, Dr. Robert Gibson, Department of Environment and Resource Studies, University of Waterloo [rbgibson@uwaterloo.ca].

Sustainability Assessment and the Ottawa 20/20 Growth Management Strategy

The City of Ottawa has responded to major growth pressures with its Ottawa 20/20 Growth Management Strategy plus a Corporate Plan. Both aim for “a more compact, efficient, equitable, affordable and environmentally-healthy city, one that affords a high quality of life and offers its citizens a range of lifestyle and travel choices”. While this approach is inclusive of many environmental factors, it is inadequate for long-lasting sustainability. Sustainability assessment, if applied by the City of Ottawa, could strengthen the city’s growth management plans, while addressing some of the challenges the 20/20 Strategy has faced, such as a lack of integration of environmental and social aspects in decision-making.

The Author

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Sustainability Assessment and the Ottawa 20/20 Growth Management Strategy

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Sustainability Assessment and the Ottawa 20/20 Growth Management Strategy

Introduction

Some cities in Canada today are facing rapid growth in population, and are struggling to find ways to manage. At the same time, environmental issues are increasingly a concern in the eyes of the public, and the way cities are currently designed is regarded as a contributor to environmental problems (Jabareen 2006). Various approaches have been taken in cities across the western world to deal with growth management while moving towards environmental sustainability.

The vast body of theory on sustainability continues to grow with the increasing popularity of the concept of sustainability and environmental responsibility. In the municipal world, this has meant that theory has been applied at a practical level, in various places, with varying degrees of success. A new kind of environmental approach - called sustainability assessment - is emerging as a major sustainability-enhancing tool. It is extremely comprehensive, building up sustainability by putting environmental and social concerns at the forefront and acting as the basic foundation of the planning process. Aside from being a cutting-edge environmental assessment approach, it may well be beneficial to the City of Ottawa's 20/20 Growth Management Strategy and help it address some of the challenges it is facing.

Methodology

In order to understand sustainability as an emerging feature in planning, especially at the municipal level, it is important to review some of the sustainability literature that has been gaining notoriety and has been used, to varying degrees in an effort to increase sustainability. This paper does so by looking briefly at a variety of sustainability theories and practices that have been implemented municipally. This information was gathered primarily from journal articles, though there is some discussion of these theories on municipal websites.

Municipalities around the world are becoming more environmentally conscious, and are using a variety of methods to address their environmental woes. In order to get a general understanding of Canadian municipalities' accomplishments so far in environmental planning, this paper first offers an overview of the environmental/sustainability/growth management plans and strategies of Windsor, Hamilton, Tofino and Ucluelet and the B.C. Capital Regional District. This information was compiled from municipal websites, journal articles and newspaper articles.

The sustainability assessment framework on which this paper is based is from Robert Gibson's 2005 book, *Sustainability Assessment - Criteria and Processes*. It is supplemented by commentary on the concept of sustainability assessment gained from journal articles. This paper uses sustainability assessment as the primary sustainability framework because it is on the cutting edge of sustainability theory and is currently one

of the most complete, integrated and sustainability-promoting theoretical frameworks available for planning applications. It also serves as an excellent evaluation tool for the effectiveness of the City of Ottawa's growth management strategy.

The City of Ottawa was chosen as the main case study for application of a sustainability assessment framework because the City of Ottawa went through a visioning process in 2003 and came out with a growth management strategy that was to be reviewed every year. This provided a case study of a plan that, while relatively recent, would have gone through a few years of review, thus demonstrating what was working and what was not, and where sustainability considerations were sitting in terms of priority and implementation.

The majority of information on the City of Ottawa's growth management strategy was found on the City's website. This is where information on population, city health and general demographics was located. Here also was the entirety of the Ottawa 20/20 Growth Management Strategy, plus the Corporate Plan, which is essentially the implementation aspect of the Strategy, and the Charting a Course document, which was the founding document of the Strategy. An interview with a City of Ottawa planner gave the paper context on the design of the Strategy, what it hoped to accomplish, and what progress it was making towards its stated vision of a more environmentally sustainable, healthier city.

The Strategy was evaluated under the criteria provided by the sustainability assessment framework from Gibson's book. This revealed where the Strategy addressed the sustainability assessment, and where it was lacking. The paper then explains how sustainability requirements could address some of the challenges the Strategy faces on the road to sustainability, and how aspects of sustainability assessment could be incorporated in the Ottawa 20/20 Growth Management Strategy to ensure that social and environmental sustainability were a priority in decision-making and that the Strategy would be more likely to achieve its goal of increased sustainability.

Sustainability Literature and Theory

The concept of sustainability is rather like happiness. Everyone has a concept of what it is, but each definition is slightly different (Jepson 2001). One general definition is "a blending of social, economic and environmental principles" (Hanna 2005). Biro and de Vreede (2004) define it as "a means to create systematic models to prevent future ecologically-induced destruction." Berke (2002) describes sustainability as a balance between economic, social and environmental factors, system reproduction ability and linkage to local and global concerns.

These concepts as applied on a more specific scale to communities and cities can mean increased public participation, progressive social indicators for success, stable funding, and state responsibility, operating at multiple scales (Biro and de Vreede 2004). Sustainability's popularity is rising with the recognition that ecological well-being can be directly correlated to human well-being, and ecological crises to human crises (Berke 2002, Biro and de Vreede 2004). On top of its focus on environmental health, sustainability also embodies the optimization of social well-being, an integration of

environmental issues, health, knowledge, politics, culture and economics (Biro and de Vreede 2004).

Sustainable Development

Almost as prevalent (and ambiguous) as the term “sustainability” is “sustainable development.” This is an umbrella term that includes various types of sustainable development practices. Its original and most cited definition from the Brundtland Commission’s *Our Common Future* is “..development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs” (Berke 2002). This indicates a central focus on intergenerational equity, while also including environment and economy, and putting all these factors together in an integrated manner (Berke 2002). Further, the Brundtland definition contains two key concepts (Gibson 2005):

- “The concept of ‘needs’, in particular the essential needs of the world’s poor, to which overriding priority should be given; and
- “The idea of limitations imposed by the state of technology and social organization on the environment’s ability to meet present and future needs. Even the narrow notion of physical sustainability implies a concern for social equity between generations, a concern that must logically be extended to equity within each generation.”

This increasing focus on sustainability and sustainable development has led to a reexamination of the urban form and a myriad of discussions on different sustainability-building methodologies (Jabareen 2006). It is becoming clear that sustainable development has an increasingly important role to play, especially in municipalities, and that planning and sustainability are indeed complementary (Jepson 2001). The difficulty of sustainable development exists in finding a consensus of how to put it into practice (Berke 2002), and there is an increasingly involved body of sustainability proposals and initiatives. Recently emerging key areas of sustainable development thought and practice include sustainability indicators, smart growth and sustainability assessment.

Sustainability Indicators/Genuine Progress Index

Generally accepted economic indicators use a dollar type figure for measurement, but do not, for the most part, explicitly address the environment (Holden 2001). Some economic indicators do include some costs of environmental pressure caused by human activity, though not necessarily as a central consideration (Holden 2001). But environmental qualities, even those recognized as being directly and indirectly beneficial for humans, are impossible to measure simply in monetary terms. This led to the creation a system, or sustainability-based indicator framework, that would use social and environmental considerations as main pillars of measurement “to monitor progress in the city towards the broad and varied goals of environmental, economic and social sustainability, in order to improve policy and public awareness” (Holden 2001).

The Genuine Progress Index (GPI) is one example of such a sustainability-based indicator framework (Biro and de Vreede 2004). Originally proposed as a response to the evident deficiencies of the Gross Domestic Product measure, the GPI uses various

indicators (volunteerism, employment patterns, environmental attitudes, etc.) to develop an overall understanding of the social and environmental, in addition to the economic health of a community (Biro and de Vreede 2004).

Another indicator that falls in this category is the ecological footprint (Newman 2006). It is created through the measurement of extraction of water, food, energy and land and how much ecosystem services are needed to absorb wastes, in order to paint a picture of a community/city/country's environmental impact. It can be applied at a scale from the individual to an entire nation.

Indicators of this sort are proliferating across Canada and the United States, and there is a general consensus that such indicators tend to make complex information more accessible to the average person (Newman 2006). However, in order to be relevant and drive change, indicators must move beyond simple communication of information (Holden 2001). The ecological footprint, for example, may provide a good indicator of consumption and population, but does not easily lend itself to helping with policy decisions (Newman 2006). It is also of limited value when addressing specific local issues (Newman 2006). Indicators themselves have been criticized for lacking a solid theoretical framework (Jepson 2001).

Smart Growth

The concept of Smart Growth emerged mostly in reaction to the undesirable properties associated with increasing suburban sprawl (Downs 2005), including loss of open space to development, increased pollution and roadways and costly infrastructure expansion. Smart Growth has several common principles (Downs 2005). These are:

- Making settlement more compact and limiting new development sprawl
- Increasing residential density in old and new areas/developments
- Encouraging pedestrian-friendly, mixed use neighbourhoods to reduce short-trip car dependence
- Emphasizing public transportation over private vehicles
- Taking costs of new developments from the community at large, and placing them on the user
- Revitalizing older neighbourhoods already in existence

Smart Growth advocates also emphasize affordable housing and diversity of regulations relating to neighbourhood esthetics.

Smart Growth does face some challenges. The aforementioned principles are not comprehensive, and there has been varying success in their application (Downs 2005). As well, because Smart Growth demands some rather significant changes (especially a shift from a sprawling metropolis to a compact urban area), citizens and other actors may be resistant, especially those who stand to lose from the shift (for example, developers, and farmers wanting to sell their land). Citizens may also resent an anticipated reduction in their property values due to lower-income housing being built in their neighbourhoods, or have an aversion to densification altogether, especially if they live in the suburbs (Downs 2005). As a result, smart growth policies are not always easily implemented. Smart Growth lends itself best to regional planning, due to the heavy emphasis on curbing sprawl, and how this can affect more than one municipality. But this makes the framework difficult to apply at different scales.

Some argue that Smart Growth causes a rise in housing prices, and is incompatible with affordable housing. Even though this does not have to be the case, it does mean careful planning that can work against economic incentives (Downs 2005). And Smart Growth is not always developer-friendly. Because it can drastically increase bureaucratic red tape, only larger-scale developers may be able to afford to pitch for developments in a Smart Growth municipality (Downs, 2005). Downs (2005) argues that the only effective way of implementing Smart Growth at is state or province level, which may make it implausible for towns and cities.

Finally, Smart Growth has been criticized for its lack of public consultation (Downs 2005). Smart Growth can often be driven by special interest groups or government, rather than by the citizens whom it affects most. This is problematic, as any good planning process must communicate all considerations and decisions thoroughly and be inclusive (Hanna 2005).

Eco-Cities and Eco-Villages

This type of sustainability initiative is focused on a variety of institutional, environmental and social policies that work together towards sustainable management of cities and towns (Jabareen 2006). Two especially significant components of these cities are greenspace creation and passive solar design. While the main focus of this type of planning is sustainability, it exists as a sort of a formless entity, not particularly focused on aspects such as density and compactness. This lends it some ideological sway, in that it paints a nice picture of a sustainable community, but does not provide practical steps (such as a framework, or instruction manual, one might say) for implementation.

New Urbanism

This new approach to urban planning has revitalized planning and has driven it to be about more than simple process. It focuses on a design-oriented approach that encourages density and mixed land use development resulting in vibrant, close-knit, and accessible and esthetically appealing living environments (Berke 2002). It is divided into three basic levels – regional, neighbourhood and street, and encourages transit alternatives, separate and distinct neighbourhoods, economic cooperation between regions and municipalities, respect and appreciation for history of the region, architecture that is seamless and esthetically pleasing, and use of eco-approaches (such as passive solar heating) in its design.

New urbanism also highlights compact development, thus reducing environmentally unsustainable sprawl (Berke 2002, Jabareen 2006). It is seen as a neotraditional approach, since it combines historical precedents to design housing and neighbourhoods (Jabareen 2006).

New urbanism has, however, been criticized for not offering an integrated or holistic idea of community building (Berke 2002). There has also been concern that certain new urbanism principles of one larger regional level are incongruent with those at a smaller, more local level (Berke 2002). It has also been criticized for avoiding economic considerations (Jepson 2001), increasing gentrification and pushing out the poor (Berke 2002).

Few environmental considerations are addressed at the neighbourhood level, while overall, ecological considerations are only a small part of the overarching

principles (Berke 2002, Jabareen 2006). So while it seems that the theory of new urbanism is sound, the implementation and flexibility is lacking. There are even doubts that cities modeled in the new urbanism style are more dense than their sprawling, suburban counterparts (Jabareen 2006). As a result, its overall effectiveness has been challenged, and it is not clear that in the few cases where this approach has been taken, positive environmental changes have resulted.

Lessons from the Literature

Indicators can be a good tool for the measurement of individual environmental and social considerations, but must be paired with implementable plans in order to have an impact. Due to the infinite number of indicators that can exist, using one simple set of indicators may not be effective in painting a complete picture of the current environmental and social surroundings. Similarly, new urbanism is not comprehensive in its approach, missing an in-depth consideration of social and economic factors. It has changed the landscape of planning to include sprawl reduction and esthetic considerations, but has no mechanism for integration. Eco-villages are more effective at including factors outside of those concerned with the environment. However, eco-villages suffer from being unable to be implemented at various scales.

Smart Growth may be the most popular and successful approach of those listed. It includes limiting sprawl through density increase in all areas of development, reduces car dependence through mixed use planning and an emphasis on public transportation, and the revitalization of old, established neighbourhoods. But even with all these ecologically and socially positive elements, Smart Growth suffers from incomplete considerations or factors, in addition to being inflexible in its application to the various geographic levels.

While it is encouraging that different sustainability frameworks and theories are becoming more commonplace, we still lack a comprehensive, flexible and easily implementable form of a sustainability theory that really focuses on the long-term and makes sustainability a foundation of planning rather than an afterthought. This is confirmed by the experiences of several Canadian municipalities, using various approaches to establishing sustainability. They had varying degrees of success, but none really was able to gain this foundational sustainability.

Case Review: Municipal Sustainability Plans

It is not sustainability theory alone that has been blooming. There is increased awareness in municipalities that it is no longer acceptable to ignore environmental considerations when engaging in the planning process. The mounting scrutiny of the public and the ecological consequences of poorly-planned endeavors have resulted in environmental considerations receiving much more attention than they used to (Berke 2002). Various municipalities across the country, from the Cities of Windsor and Hamilton, all the way to Tofino and Ucluelet, and the BC Capital Regional District on Vancouver Island have been using various approaches to “green” their cities. These environmental and growth management plans have had varied success in establishing long-term sustainability.

City of Windsor

The City of Windsor, an Ontario city of approximately 210,000 released its first environmental master plan on July 25, 2006 (DPRA 2006). The city, like many others, is starting to face growth pressures, with formerly farming/rural land being redeveloped for residential use.

The plan was formed through background research, plus consultations with the public, city councilors and other stakeholder groups (DPRA 2006). City officials and planners hoped that the environmental management plan would streamline city environmental programs, increase environmental awareness amongst the public, develop environmental leadership and further environmental sustainability in the City of Windsor, and reduce the gaps and overlap of the environmental services directory (DPRA 2006). All of this followed a four-phase timeline.

The plan itself consists of four components (DPRA 2006): a strategic direction (overall plan/vision of what the city sees as good environment), goals (general statements of desired achievements), objectives (statements describing the goals to be achieved – meant to help achieve the goals) and an action plan (various steps for achieving the goals).

The Environmental Management Plan (EMP) suggests that each report to council should explain how it is linked to environmental considerations. Aside from specific funding information for the environmental officer position, other funding issues are to be dealt with in the budget.

The City adopted a rather narrow definition of “environment,” referring to it as “natural components of the environment” (DRPA 2006) and human interactions with these components. While they claim that it is consistent with the Canadian Environmental Assessment Act’s definition, it falls well short of what sustainability actually embodies, as it provides no link to social and economic factors.

This growth management plan is also fragmented. There is little integration of environmental considerations into all decision-making and no clear accountability of who is going to ensure that environmental factors are taken into account in all actions.

The City of Hamilton

In 1992, the City of Hamilton embarked on a visioning process for determining what the city would look like in the future. This process and the resulting planning tools came to be known, in 2001, as “Vision 20/20” (City of Hamilton 2003). In the Vision, the city’s definition of a sustainable community is centred on four principles: fulfillment of human needs, maintenance of ecological integrity, provision for self-determination and achievement of equity. These principles highlighted safeguarding for future generations, environmental protection, rehabilitation, stewardship and reduction in waste, and the importance of public involvement.

- The Vision laid out five areas of focus (City of Hamilton 2005):
- Quality of life (adequate food, shelter, income and education, non-violent environment, importance of culture and arts, active citizenship),
 - The Landscape (health and beauty of the land, establishment and protection of, and access to corridors and natural areas, environmental protection, regulation, monitoring and waste reduction),

- Communities (planning for character, ecological and cultural heritage and meeting community needs, development within firm boundaries, green buildings and corridors, community strengthening and involvement, distinct neighbourhoods, participatory processes, local employment and industry reachable by public transit, and agriculture opportunities in rural areas),
- Transportation (strong, integrated public transit that is affordable, accessible and efficient, emphasis on alternatives to individual vehicle transportation, streets designed to accommodate cycling, public transit, pedestrians and vehicles, rail service for out of town visitors, and rail and marine service for transport of goods), and
- Livelihood (stable and flexible economy, development of local resources including a skilled workforce, employment training, creation of a sustainable economic sector, health and environmental safety in the workplace, economies based on culture and natural resources and tourism), rural communities (support for agriculture, economically viable and environmentally considerate farming practices, strong urban-rural links), and co-operation

While progress has been made since the conception of the plan, reservations were expressed about its possible success rates in the future (City of Hamilton 2003). This is due to issues such as long-term goals being undervalued in light of pressures for short-term gains, the new and increasingly complex stresses that the city is facing and an inability to keep up sustainable decision-making with new and expanding development.

The lack of focus on sustainability well be the result of the fragmentation of sustainability components in the plan, in that they are not well-integrated with each other. City planners have now said that the plan is limited on how far it goes with sustainability, and requires a more integrated approach (City of Hamilton 2003). Sustainability indicator studies showed further that even though some positive effects came from following the Vision, many of the results only stabilized the environmental factors, but did not improve them. There was also some concern over the growing numbers of homeless people, indicating some serious social and economic fragility.

Most of all, the Vision lacked power and longevity. What started out as an exercise in good faith and a genuine desire to factor sustainability into decision-making has turned into a simple exercise with little long-term ramifications. It has come to the point now where the Vision is not even being factored in by councillors when making decisions (Leitner 2006). While it is admirable that the City was attempting to make plans for the future to deal with growth, the final result has not been all that effective in establishing long-term sustainability in the city.

Tofino and Ucluelet

Tofino and Ucluelet are two separate but similar towns located on the east side of Vancouver Island, British Columbia. After decades without an official plan, both towns created one; Ucluelet's plan was completed in 1998, and Tofino's in 2001. Each plan was set to last 10 years (Hanna 2005).

In both communities, planners took the reins of creating the plan, while attempting to be facilitators. In Tofino, in order to design the official community plan, the town hosted public discussions and related events. These were accompanied by discussions in the local bureaucracy and on a steering committee. The steering

committee was made up of local political members and non-elected community members. Ucluelet also held public events.

Although both towns initially focused on simply dealing with growth pressures, a sustainability-centred plan became the goal in each case. The concept of sustainability arose out of discussions, but was defined quite differently by different participants.

Both communities had four basic priorities:

- Maintaining community character
- Citizen accessibility to town features
- Affordable housing
- Greenspace

Tofino's plan is centred on the concept of a sustainable healthy community. It follows the tri-pillar approach to sustainability of social, economic and environmental considerations. The areas of focus in the plan are growth management, community and economic development, environment and resources, followed by an implementation and monitoring plan. Implementation has already included some successes. For example a new upscale hotel development included rooms for staff, which satisfies the housing goal (Stueck 2002).

The municipal plan in Ucluelet was based on a two-step approach. The first step began with a basic definition of sustainability, which also embodied the three-pillar approach (social, economic and environmental). All government decisions were required to be inclusive and integrate sustainability considerations (Hanna 2005). The second step was focused on a vision statement that details the main objectives on economic diversity, desired physical form of the town, strengthening the commercial core, public access to natural features (shoreline and forest), and west-coast inspired building design.

This is certainly an admirable approach towards addressing sustainable development in both cities, especially Ucluelet, where sustainability is to be integrated in all decision-making. Unfortunately, neither plan has a framework for how this sustainability will be considered, what level of importance is assigned to it, and how decision-makers are to address conflicting values.

BC Capital Regional District

Like the previous three municipalities, the Capital Regional District of Victoria, British Columbia is quickly growing in size and population. As a result, the region embarked upon a growth management plan in 1996 (Gibson 2005), and for good reason: it was speculated that 90,000 more people could move into the area by 2026 (Capital Regional District 2006). The plan was focused on long term growth management to be put into play until 2026 (Capital Regional District 2006).

The plan set a strong focus on sustainability, and mandated both municipal plans and provincial projects to comply with it (Gibson 2005). In order to design the plan while incorporating full public involvement, the regional planning staff worked in conjunction with a public advisory committee, several organizations including First Nations and federal and provincial governments, and the municipalities themselves (Gibson 2005).

After much investigation and analysis, an approach focused on densification of metropolitan areas and along a transit corridor was decided on (Gibson 2005). Key objectives of a stronger regional economy, more complete communities, improved

housing affordability, green/blue space protection, urban containment and rural protection and balanced regional transportation were agreed on quickly by all involved (Gibson 2005). However, the more detailed final agreement issues proved a more difficult beast, as not all municipalities in the region were willing to take on serious change. As well, the lengthy period of time it took to complete (the planning took seven years and was completed in 2003) increased frustration. But because this was a generally new area of work for both the public and the region, there needed to be time for learning and experimentation. And the different municipalities did eventually come to a consensus, although in achieving that, there was some reduction in growth management effectiveness (Gibson 2005).

The strategy's likelihood of success was dramatically increased by its backing in a provincial law that has provisions for mediation and conflict resolution (Gibson 2005). At the municipal level, the law provided a framework for specific municipal plans, and contained agreements on implementation measures such as infrastructure funding. As well, this provincial-local partnership was to be continued by provincial and municipal government implementation strategies (Capital Regional District 2005).

The sustainability strategy's success also rested on the decision to begin with sustainability objectives, which stayed as core components all through the process. This, combined with the regional objectives and strategy components derived from the core components, plus plentiful open and public debate, thorough examination of alternatives, and consensus-based conflict resolution, allowed for better decision making on tricky and multifaceted issues (Gibson 2005). The growth strategy was to have the added benefit of probably significant financial and environmental savings (Capital Regional District 2005).

The strategy is currently in an implementation stage. In order to ensure monitoring, a progress report was to be released annually, and the plan was to be reviewed every five years to see if it needed any amendments (Capital Regional District 2005).

The process and the final result, although clearly groundbreaking in this kind of work, were not without omissions of certain important sustainability factors. The issues of equity, uncertainty and effects outside of the region, were all barely examined (Gibson 2005).

Lessons from the Case Studies

With the growth of sustainability literature has been an increase in the integration of sustainability considerations into municipal planning. But as found in the sustainability literature, it is questionable how long-term and really sustainable these municipal plans are. As we can see, the City of Hamilton Vision faces several challenges in maintaining long-term sustainability, and lacks a sustainability focus in their planning process, especially as the city expands. The Windsor plan is fragmented, involving environmental considerations as simply one factor out of many in the planning process, rather than incorporating them into all decisions. This is similar in Tofino and Ucluelet, which, even with a noble effort, have not done a good job in integrating sustainability factors into the decision-making process.

The most notable effort came from the BC Capital Regional District growth management strategy. It managed groundbreaking sustainability planning while

including the voices of many members of the community. However, it too had faults. It was missing some essential sustainability factors, such as planning for equity and for uncertainty.

These case studies show two important things: one, that environmental sustainability is becoming essential factors in municipal planning, and two, that municipalities are not only willing, but also actively experimenting with ways to include these sustainability factors in their planning. However, to do this effectively, they need a sustainability framework that goes beyond the theoretical basis currently in use such as the previously mentioned smart growth, indicators, eco-villages and new urbanism, and which provides a deeply-integrated, flexible approach that would encourage long term, established social, environmental and economic sustainability.

Sustainability Assessment

A new kind of sustainable planning process, called sustainability assessment (Gibson 2005) has recently emerged, providing a comprehensive approach to sustainability. It is an approach to developing as well as evaluating policies, plans, programs and/or projects for sustainability, aiming to ensure that they make positive contributions to the development of a sustainable society (Pope et al. 2004). This kind of assessment integrates social, economic and environmental considerations, seeking multiple, mutually reinforcing gains and “net benefit” with minimal trade-offs (Newman 2006), and is considered by some as a “next step” in environmental assessment processes (Pope et al. 2004).

While the term sustainability assessment has been bandied around for some years, it has often been used as a blanket term, which included integrated assessment and strategic environmental assessment, both of which typically focus on the triple bottom line - economy, environment and equality (Pope et al. 2004). This often results in an inadvertent tendency to promote economic interests over ecological ones, resulting in a process that is, in fact, rather unsustainable (Pope et al. 2004).

Sustainability assessment reaches further than traditional impact assessment processes. Traditional environmental impact assessment, applied at the project level, is considered limited due to its usual application at a latter stage of a project and lack of serious attention to sturdy and plausible alternatives (Pope et al. 2004). Strategic environmental assessment, a step above, is applied to projects, plans, and policies, and occurs much earlier in the process. However, due to its focus on the triple bottom line (and the associated inclination to balance rather than integrate economic, social and environmental considerations), it can result in economic considerations unintentionally receiving undue attention, thus undermining the other two factors (Pope et al. 2004). Unlike the other assessment processes, sustainability assessment is not about mitigating and minimizing the negative; rather it is focused on accentuating the positive and seeking mutually reinforcing gains, thus avoiding the simplification of issues of the triple-bottom line approach (Newman 2006).

Because there is increasing awareness that the triple bottom line approach may not be all that effective (Pope et al. 2004), sustainability assessment is based instead on principles. These principles emphasize the various interdependencies and

interconnections among the three major pillars, which allows a better mechanism for addressing trade-offs (Gibson 2001 in Pope et al. 2004).

The concept of assessment has been around for years, and has been able to factor environmental considerations into decision-making (Pope et al. 2004). But in order for it to be a really effective tool for change, it must be applied within a structured framework, used to propose new initiatives at all decision-making levels and across all sectors, to the legislative and policy paradigm that is most popular, to any and all decision making processes (Pope et al. 2004). Sustainability assessment alone achieves all of these criteria.

Sustainability assessment is applicable to various levels, from project to policy. Unlike other processes, it lends itself to a more inter-disciplinary approach (Newman 2006). Sustainability assessment puts environmental concerns at the forefront, while simultaneously valuing social, cultural, equity, outside-boundary effects, carrying capacity, and long-term economic concerns, to put together an overall sustainable and strong legacy for future generations (Newman 2006).

Eight Criteria for Sustainability Assessment

Sustainability assessment, as approached by Gibson (2005) applies eight basic criteria for decision making:

- Socio-ecological system integrity

“Build human-ecological relations that establish and maintain the long-term integrity of socio-biophysical systems and protect the irreplaceable life support functions upon which human as well as ecological well-being depends” (Gibson 2005).

The earth is increasingly complex, and humanity’s place in it has become more and more defined in terms of the interrelated relationships and systems that exist in the natural world. And though social and biophysical systems differ, due to the role of human choice in social systems, it is essential that both have integrity retained. This integrity is what allows establishment and continual growth of sustainability.

System integrity (“[system] ability to adjust and reorganize in ways that maintain their key functions”) can be maintained not only by reducing human pressure on systems, but also and more importantly, by recognizing and adjusting the complex system implications of human behaviour.

- Livelihood sufficiency and opportunity

“Ensure that everyone and every community has enough for a decent life and opportunities to seek improvements in ways that do not compromise future generations’ possibilities for sufficiency and opportunity” (Gibson 2005).

The Brundtland Commission on sustainability developed a position conveying two main messages. The first was that humans are dependent on a healthy environment for survival, and as such, must work to reduce their negative ecological imprint. The second was that the maintenance and increase of ecological integrity depends on the enhancement of human well-being, especially for those people who do not have a “decent” life standard.

But sufficiency and opportunity (defined by the reduction in desperation, increase in long-term prospects, and detachment from material growth) are also part of the

equation of a decent life. They take it past simple, current survival into comfort and concern for the future. This is essential for increasing sustainability. In essence, this criterion aims for both short-term and long-term improvement in basic human life and possibilities.

Challenges come in figuring out what future needs might be, though it can be safely assumed that better ecological health will benefit future generations.

- Intragenerational equity

“Ensure that sufficiency and effective choices for all are pursued in ways that reduce dangerous gaps in sufficiency and opportunity (and health, security, social recognition, political influence, etc.) between rich and the poor” (Gibson 2005).

Equity is an essential part of a more peaceful, contented society. Working towards minimizing the gap in sufficiency and opportunity between rich and poor is not only an effective measure towards equity, but also plays a role in sustainability. This is because reducing inequality reduces powerlessness, which in itself has been associated with violence and a lack of socio-economic well-being. Discontent and poverty can often lead to ecological damage, which can, in turn, lead to more poverty and more unhappiness, and so the cycle goes. This focus on intragenerational equity expands outside of material gains, and includes such factors as health, community stability, good-quality employment and shared and mutually respected knowledge.

- Intergenerational equity

“Favour present options and actions that are most likely to preserve or enhance the opportunities and capabilities of future generations to live sustainably” (Gibson 2005).

This is a fundamental tenet of sustainability and is integrated in the most basic forms of environmental assessment. Here again though, the question of sufficiency for the future is where it gets complicated. Statements about what will be sufficient for future generations are largely speculative, and there are disagreements about how to approach current development while not harming the future. However, this factor, rather than being an obstacle, pushes assessors or creators of new projects, plans, etc. to consider what future generations’ needs might be if they were able to voice them at the negotiating table. Although this approach cannot take the place of actually having a representative at the table, sustainability will inherently benefit future generations because it is based on moral decision-making that includes a strong focus on environmental health, which, as previously mentioned is beneficial to future generations.

- Resource maintenance and efficiency

“Provide a larger base for ensuring sustainable livelihoods for all while reducing threats to the long-term integrity of socio-ecological systems by reducing extractive damage, avoiding waste and cutting overall material and energy use per unit of benefit” (Gibson 2005).

Increasing efficiency and reducing extraction of resources is also a fundamental part of sustainability, as it allows for present resource use, but also extends their use into the future for subsequent generations and reduces damage to the environment. Efficiency

can and has been greatly increased with little damage to administrative or technical capacities.

This principle stresses going beyond reduction in use to carrying capacity levels by having allowance for “wobble room” to account for uncertainty and integrity. It also underlines the importance of ensuring that a reduction in resource use in one area is not offset by an increase somewhere else.

- Socio-ecological civility and democratic governance

“Build the capacity, motivation and habitual inclination of individuals, communities and other collective decision making bodies to apply sustainability principles through more open and better informed deliberations, greater attention to fostering reciprocal awareness and collective responsibility and more integrated use of administrative, market, customary, collective and personal decision making practices” (Gibson 2005).

Civility, though regarded traditionally as a social behavior, can also be applied to socio-ecological factors. The idea behind it is a commitment to community and the environment, which must be linked with respect for shared rights and global responsibility. The impetus is to go beyond regulation to build a broad public inclination towards community-centred concern and action.

The ability to build action towards sustainability rests on the integration of four main tools: governments, markets, custom and choice. The combination of pressures from the public and other stakeholders on government and corporations for increased sustainability as well as the motivations behind citizen concern for sustainability will help incorporate all stakeholders in the pursuit of sustainability.

- Precaution and Adaptation

“Respect uncertainty, avoid even poorly understood risks of serious or irreversible damage to the foundations for sustainability, plan to learn, design for surprise and manage for adaptation” (Gibson 2005).

The sheer amount of complexity that can arise during sustainability deliberations means that uncertainty must be respected. Identifying all factors in an assessment is nearly impossible – we do not possess the knowledge base to do it – and how all these unknown factors, especially biophysical ones, will react to different impacts is impossible to determine. Gibson (2005) defines three types of uncertainties: ignorance (we are unsure of what to expect), vagueness (there is some knowledge of what may happen, but important parts might still be missing or fuzzy) and evaluation difficulties (it may not be possible to determine importance of conditions, changes and relations, even if they are known). Both public involvement to determine what is best and fair, and precautionary approaches lend themselves to helping avoid peril and respect these different types of uncertainty. This precautionary approach allows for minimization of unanticipated effects and risks by favoring options that are flexible and can anticipate surprise.

- Immediate and long-term integration

“Attempt to meet all requirements for sustainability together as a set of interdependent parts, seeking mutually supportive benefits” (Gibson 2005).

All of the above listed sustainability requirements are interconnected and interdependent. They cannot be implemented singly and are designed to work together for the most sustainable outcomes. It is not a question of balance, since balance can result in incremental, but nonetheless notable sacrifice. Past claims of balancing by authorities have often meant ecologically damaging initiatives have been approved, if mitigated with some conditions. This means that even though a balance of some sort has been achieved, an overall ecological loss has occurred.

With the final criteria working together, conflicts are minimized and benefits are maximized, as benefits in more than one area are encouraged. The immediate and long-term integration means that the plan or strategy to which the framework is applied will have long-term benefits, and will be flexible enough to allow for benefits in new and changing priority areas.

While these sustainability assessment criteria are seemingly the most promising foundation for a strong sustainability focus for decision making, they must be supplemented by trade-off rules in order to complete the framework, and avoid the perils caused by attempts at balancing.

Addressing Trade-Offs

In theory these principles work well when applied in combination. In practice, however, there can be conflicts between principles, and moral choices will have to be made about what actions will have the most overall benefit and what negative effects or risks may be acceptable. Even in situations where all actors in the process are dedicated to sustainability principles, it may not be possible to fulfill all the criteria (Gibson 2005). This is why there is a necessity for trade-off rules that allow those embarking on the design or assessment of a project, plan or program to address real situations while still not losing sight of a strong sustainability basis (Gibson 2005).

It is important to note that trade-off strategies should only be employed when they are unavoidable; in other words, the situation can have no other resolution than a trade-off (Gibson 2005). They cannot be used to justify severe reductions in sustainability in the name of short term gain. However, they can be justified in the case when a trade-off in one area of sustainability would lead to a much needed significant gain elsewhere. The following trade-off rules should be built into the plan, but will also affect the process if, for example, certain large improvements also mean a reduction in public consultation and learning (Gibson 2005). This small set of rules is meant not to clutter the process and stifle innovation – rather they are to act as a basic guide when it comes to trade-off decision making.

The Six Trade-off Rules

- Maximum net gains

While mutually reinforcing gains towards sustainability in all decisions are always desirable, they are not always possible (Gibson 2005). In the situation when this is not possible, the best ending achievement should be the options that provide the highest overall net gain in sustainability. In situations where there may be no positive gain, choosing the “least bad” option can contribute to an overall gain, compared with what would have happened otherwise.

- Burden of Argument on Trade-off proponent

This trade-off rule assumes that any negative effect is unacceptable unless reasonably argued otherwise, and that it is the responsibility of the proponent advocating for the tradeoff to provide proof (Gibson 2005). How this is proven may depend on the circumstances, because so much of sustainability assessment and planning is based on experience and uncertainties about future effects.

- Avoidance of Significant Adverse Effects

This rule aims to reinforce overall benefit-seeking of sustainability assessment through avoidance of significant negative effects (Gibson 2005). Once effects are defined as significant, this rule postulates that no significant adverse effect is acceptable unless not allowing for it would mean an even more significant adverse effect would occur. Any tradeoff that could severely decline an area already of major concern (identified through international/national/regional/local bodies or public consultations) or put in danger the overall viability of all the requirements together is unacceptable.

- Protection of the Future

Although this rule is enumerated already in the sustainability criteria, it needs special consideration, as intergenerational equity is a fundamental core principle of sustainability itself (Gibson 2005). While it is not always possible to know if an effect will have a significant impact on future generations or what future generations would want since they cannot be present at the negotiating table, decision makers today can and should ensure that no present gain means a significant negative effect is displaced onto future generations. The exception to this is when not allowing a current significant negative effect would mean an even more significant negative effect placed on future generations.

- Explicit Justification

In the cases when trade-offs are unavoidable, they must be accompanied by detailed information on the trade-off rules and sustainability decision criteria (Gibson 2005). The process that was followed to reach the trade-off must also list any other relevant information on how the trade-off decision was reached, and why it is justifiable.

- Open Process

The process for designing a sustainability-based plan must include expert information, proponent information and very importantly, public input. All proposed trade-offs and compromises must have gone through open public deliberations and involvement of all stakeholders (Gibson 2005). Involvement of an informed public is absolutely essential. In a study performed in the United States, Jepson (2004) found that one of the biggest impediments to any kind of sustainable development initiatives was low public interest. Thus the process must not only be open, but engaging and relevant as well.

Municipalities and Sustainability Assessment

Sustainability assessment is an excellent planning strategy generally, but could be particularly cogent for municipal planning. Newman (2006) argues that sustainability assessment is a well-fitting solution to managing positive growth in cities, as it can provide an integrated set of goals that in turn guide development and lead to a maintained

or reduced ecological footprint of a municipality. Of course, the trade-off rules and sustainability criteria are general. This is part of what makes them flexible, but it also means that they must be used in partnership with specific considerations for the local community, and factor in its needs, challenges and goals. Overall, sustainability assessment provides the first deeply comprehensive, flexible and applicable framework that makes sustainability the foundation upon which the rest of the planning process is built.

Case Study: The City of Ottawa

The City of Ottawa is the fourth-largest city in Canada, spanning an area of 2,760 square kilometres, much of it rural (City of Ottawa 2006b). While Ottawa was originally established in 1885, the new City of Ottawa came from the January 2001 amalgamation of the Region of Ottawa-Carleton and 11 local municipalities: Cumberland, Gloucester, Goulbourn, Kanata, Nepean, Osgoode, Ottawa, Rideau, Rockcliffe Park, Vanier, and West Carleton (City of Ottawa 2006c).

The City has a very high quality of life (City of Ottawa 2006c). The largest sector for employment of Ottawa citizens is the advanced technology sector, with 78,000 people employed (City of Ottawa 2003d). Ottawa also maintains strong employment in the Federal government, with 73,000 people employed, health and education with 70,000 employed and trades, with 57,000 employed.

Tourism is also a significant aspect of Ottawa's economy, due in large part to the city's status as the country's capital. Tourism promotion efforts are largely the domain of the National Capital Commission, a federal crown corporation that sponsors many festivals and events (Winterlude, sound and light show, etc.), and is also responsible for infrastructure and land management of all federal land in the region (National Capital Commission 2006b).

The City of Ottawa exists within the 4,715 square kilometers of the National Capital Region, which is the federal designation for Ottawa, Gatineau, and surrounding areas (Wikipedia 2007b). The National Capital Region is an area, not an institution. However, the corresponding National Capital Commission does play a heavy role in political and cultural concerns of the area (Wikipedia 2007a), especially since the federal government is directly responsible for about 470 square kilometers (parks, roads greenspaces, etc.) of the Region. The purpose of the NCC is to work on issues of national planning and tourism interest in the region, such as planning museums and specialized boulevards.

Like many urban centres in Canada, the City of Ottawa is facing major growth, which is expected to continue indeterminately. Its population has grown 40% in 20 years (City of Ottawa 2003e) and is expected to increase by a further 50%, or 400,000, bringing its 800,000 population to closer to 1.2 million by 2021 (City of Ottawa 2003a). The job base is expected to grow by 250,000 jobs by 2021 (City of Ottawa 2003a). Part of the population boom has come from immigration, which was responsible for 39% of the growth from 1996 to 2003 (City of Ottawa 2003d).

The city is outgrowing its original borders, and now poses a threat to rural and natural spaces. Already existing environmental issues, such as river and stream water

quality, diversion of waste from landfill, greenhouse gas emissions and road congestion (City of Ottawa 2003f) will be exacerbated by growth. This has encouraged the search for a more ecologically-centred approach (Quealey 2006).

Ottawa 20/20 Growth Management Strategy

Realizing that growth was becoming a pressing issue, the City of Ottawa embarked on the creation of the Ottawa 20/20 Growth Management Strategy. The process began in June 2001, after a Smart Growth conference, and was shaped over the next two years. Based on the Smart Growth concept and principles of development (City of Ottawa 2003a), Ottawa 20/20 was meant to help the city manage growth in a sustainable manner.

A preliminary strategy with several principles, called *Charting a Course*, was drafted by City of Ottawa staff, who undertook some preliminary consultation with the City's citizen-staffed advisory committees (Whitehouse 2007). The preliminary strategy was then brought to public consultations from January to March 2002 (City of Ottawa 2002). The consultations were undertaken at open houses and comments were solicited through the internet, businesses, advisory committees, community groups and residents. The consultation was widely publicized through radio and television, mailouts, and community partnerships.

Through this consultation, six principles emerged as key to residents, businesses and organizations in the City of Ottawa (City of Ottawa 2002). Accountability of government to follow through on promises and policy, and to create indicators to measure progress was raised, as was an emphasis on open and equal partnerships linking government, businesses and community groups. Citizens also underscored the value of these partnerships and favored a strong rural economy, connecting business to a strong workforce, complete, strong communities, fiscal responsibility, access to the basics, a green and beautiful city, a focus on walking, transit and cycling, diversity and citizen engagement, personal security and safety, clean water and air, environmentally sustainable development, dynamic local arts and heritage and culture in every community. All these came together to form the seven guiding principles of Ottawa 20/20 (City of Ottawa 2002 – see box below).

The strategy employs a “quadruple bottom line” approach of highlighting financial, social, environmental and cultural sustainability (City of Ottawa 2006a), and includes this in their definition of sustainable development: “a strategy that requires the integration of economic growth, social equity, and environmental management. It is about ensuring a better quality of life for everyone, now and for generations to come.” (City of Ottawa 2003f). The strategy authors also quote the Brundtland Commission's definition of sustainability.

The 20/20 vision “describes a more compact, efficient, equitable, affordable and environmentally-healthy city, one that affords a high quality of life and offers its citizens a range of lifestyle and travel choices” (City of Ottawa 2003a). It is based on the seven guiding principles set out in the box below (City of Ottawa 2003a).

Seven Guiding Principles of Ottawa 20/20

- A Caring and Inclusive City (engage citizens, embrace diversity, protect

- community identity, promote safety, ensure access to basic necessities)
- A Creative City Rich in Heritage, Unique in Identity (build opportunities and creative capacity for the arts, preserve heritage, develop a vibrant city center, create a sense of place)
 - A Green and Environmentally-Sensitive City (protect greenspace, natural resources and ground and source water, improve air quality and reduce greenhouse gas emissions, improve ecosystem planning and design)
 - A City of Distinct, Livable Communities (strengthen existing communities, create complete communities, encourage sustainable transportation and transit-friendly development, develop mostly in priority areas, balance jobs and housing, create a community design culture)
 - An Innovative City Where Prosperity is Shared Among All (invest in people and places, build innovation, knowledge and ideas, strengthen key economic initiatives, reinforce economic goals through land policy, actively promote the City)
 - A Responsible and Responsive City (think strategically, partner with stakeholders, focus on fiscal responsibility, accountability and customer service)
 - A Healthy and Active City (encourage walking, cycling and healthy lifestyles, build and maintain infrastructure, and promote public safety)
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Based on these guiding principles, the growth management strategy is made up of five major plans and strategies: the official plan, the economic strategy, human services plan, arts and heritage plan, and environmental strategy (City of Ottawa 2003a). The official plan is focused on design, infrastructure and physical characteristics of the city (target areas for densification, encouragement of walking and cycling, etc.), while the other four plans are of a more strategic nature.

City staff prepared these plans after some stakeholder consultation. Once completed, they were brought to city council for approval, at which point stakeholder groups had an opportunity to contribute their comments (Whitehouse 2007). After all these plans were completed, a corporate strategic plan was released, detailing an implementation plan for all plans in Ottawa 20/20 (City of Ottawa 2003d).

The Five Plans of the Ottawa 20/20 Growth Management Strategy

Official Plan

The Official Plan is the policy framework defining action to the year 2021, and serves as a legal document to address the issues of interest to the province as defined under the Ontario *Planning Act* (City of Ottawa 2003f). It specifically focuses on the physical development aspects of the city’s growth: transportation and infrastructure policies and land use and community design. The Official Plan incorporates the seven

principles of Ottawa 20/20 through a land-use and a community design perspective. It lists specific projects that fall under each of the principles.

Three sub-plans fall under and specify the Official Plan: the transportation master plan (cycling, walking, transit and roads), the Infrastructure Master Plan (meeting demand for wastewater, public water and stormwater services), and the Greenspace Master Plan (policies of protection, management and acquisition for all components of greenspace) (City of Ottawa 2003f). The plan also includes a zoning by-law created through wide public consultation and a focus on community design in order to ensure that the actions taken by the municipality are community-relevant.

As with the rest of the Vision, the plan is flexible to allow for future changes in projected population, changing demographics and other alterations. There may be amendments to the Official Plan when the requirements of the *Planning Act* may affect implementation (City of Ottawa 2003f). Amendments may also be made by City Council when, for example, a property owner wants to change the land use in ways not consistent with the plan.

Human Services Plan

The human services component of Ottawa 20/20 covers areas such as recreation, employment, long-term care, community funding and emergency services and ties them to innovation, collaboration, sustainability and creativity (City of Ottawa 2003e).

Like the Official Plan, the Human Services Plan has three sub-plans: the Community Infrastructure Plan (to identify the needs for services of community, to stretch resources to best serve the community), the Affordable Housing Strategy (to increase affordable housing in the city) and the Talent Plan (to match the skills of the workforce with those desired by employers; also a part of the economic strategy) (City of Ottawa 2003e). The concepts of sustainability, innovation/creativity and collaboration are to play into all decisions and plans made under the human services plan.

The Human Services Plan focuses on providing all services in both official languages, and increasing quality of life, which is defined as “the level of satisfaction felt by individuals and/or groups...the gap between the hopes/expectations of people and the lived reality of their daily experience” (City of Ottawa 2003e). In the urban context, quality of life has to do with access to services and the quality of the living environment, as well as social equity and economic and environmental health.

The Plan encourages efforts to gain more financial sustainability through public-private partnerships, lobbying upper levels of government for more money, and applying standards for fees and rate setting and long-term debt financing (City of Ottawa 2003e). Increased encouragement of innovation is expected to force more creative solutions to financial restraints and help lead the city towards modern, internet-based technology.

The Human Services Plan addresses diversity and disability issues through promotion, communication, focus on inclusivity, and policy statements on both issues (City of Ottawa 2003e). Poverty reduction and inclusion of all citizens is another strategic goal, which includes increasing affordable housing and self-sufficiency, and reducing the gap between rich and poor. The interests of women, children, aboriginal people and members of the lesbian-gay-bisexual-transsexual-queer community are also included in these strategic goals (in the sense of increasing equality and quality of life).

Community empowerment is also an important part of this plan, which underscores public consultations, advisory committees, timely information

communication and community-based planning (City of Ottawa 2003e). The plan pushes for safe and healthy communities in rural and urban areas, with quality services for all residents, including recreation, arts and heritage and libraries.

Arts and Heritage Plans

The Arts and Heritage Plan sets out the future direction for cultural aspects of Ottawa. The Plan is separated into two parts: the Arts Plan, which provides the mission, context, strategic direction, objectives and actions for fostering creativity in Ottawa, and the Heritage Plan, which outlines the challenges and opportunities in the protection, use and development of Ottawa's heritage resources (City of Ottawa 2003d).

The Arts Plan aims to guide Ottawa towards becoming a "creative city." It will stimulate cross-disciplinary collaboration, encourage new ideas and innovative approaches, bridge the gap between art and technology, community and nature and attract and maintain media, literary, visual and performing artists (City of Ottawa 2003d). It covers leisure and recreational art, amateur artistic activity, and emerging and professional artists and the arts industry.

Like the other plans, the Arts Plan supports the seven Ottawa 20/20 principles, and was created in part with wide community consultation (City of Ottawa 2003d). Like some of the other plans, the Arts Plan lists insufficient funding as a future challenge. The authors list several funding possibilities, including funding from all levels of government, private investment, and a hotel tax.

Also like the other plans, the Arts Plan lists five strategic directions, each with specific priority actions (City of Ottawa 2003d). These directions are: build creative capacity, broaden public access, realize economic potential, revitalize public and natural space, and retain local artists. These are coupled with the three "essential strategies" to start and encourage investment in the local arts community, increase promotion about Ottawa's local arts scene, and create more useful space for artists, audiences and community. After these three strategies have been implemented, action on several more strategies is to follow: strengthen arts training and education programs, encourage diverse community activities, enhance community cores and also public and natural spaces to include a focus on the arts, gather, protect and promote local art in Ottawa and aid artists in integrating with the arts industry (City of Ottawa 2003d). Each of these strategies includes a policy statement. The Arts Plan also lists short-term actions (3-5 years) and a five-year action plan. There are also medium-term goals (5-10 years).

Heritage was defined by the heritage plan working group as being a link to a historical legacy (City of Ottawa 2003d). This encompasses heritage property, natural and cultural heritage. Heritage protection and celebration, as defined here, can have a significant economic impact in the city, mainly through tourism. Heritage sites and programs allow citizens, both new and old, to understand the origins and history of their city.

The Heritage Plan stipulates that the city will lead the way in identifying, collecting and preserving Ottawa's documentary and material heritage, build capacity and research, develop and promote Ottawa's heritage (City of Ottawa 2003d). It was created using public consultation and a main working group. Partnerships amongst stakeholders are to be formed, as under all the other plans.

This Plan offers the potential for several sub-plans and strategies, such as a museum strategy, feasibility studies, fundraising strategy, marketing plan, collection and documentation plan and disaster preparedness and recovery plans (City of Ottawa 2003d). Like the Arts Plan, the Heritage Plan has strategic directions, which are to build capacity in heritage promotion and protection, identify, collect and preserve heritage materials, and research, interpret and promote Ottawa's heritage. It also contains short, medium and long-term plans (City of Ottawa 2003d).

Economic Strategy

The Economic Strategy devised as a part of Ottawa 20/20 was meant to guide the economic vision of Ottawa; to make it competitive in the international marketplace and to strengthen the local economy (City of Ottawa 2003b). Its aim is to provide prosperity and livability through economic growth, as well as to create a strong and prosperous economy that can manage change and make Ottawa a global city while recognizing equity, innovation and environmental stewardship. The strategy was developed through consultation with representatives of the business community (City of Ottawa 2003b).

The Economic Strategy has two sub-plans: the Broadband Plan (to bring broadband connections to unconnected areas, and increase telecommunications technology in the city) and the Talent Plan (to strengthen work infrastructure and match up skilled employees with employers) (City of Ottawa 2003b). The strategy, along with the seven principles that make up the Ottawa 20/20 plan, is guided by five directives (a strong, export-based economy, strong rural economy, strong local businesses, connecting businesses to a strong workforce and connecting people to opportunities), and five strategic priorities (strengthen industry cluster and entrepreneurship, idea and knowledge sharing, promotion of Ottawa globally, investment in people and place, and linking innovation to the marketplace) (City of Ottawa 2003b).

This strategy has several policies dedicated to supporting job development and training, agricultural land protection and promotion, increasing collaboration on knowledge sharing, promotion of ideas and businesses and entrepreneurship, strengthening industry clusters, and increasing tourism (City of Ottawa 2003b).

Environmental Strategy

The Environmental Strategy's goal is to: "protect and strengthen local ecological features and processes, and to reduce the city's environmental impact at the global level," (City of Ottawa 2003c). It contains four specific goals to address this: a green city (plentiful greenspace, biophysical health), development harmonious with nature (development planned on sub-watershed units, reduction of urban sprawl and community satellites), strong focus on walking, cycling and transit (through pedestrian and cyclist corridors, affordable transit), and clean air, water and earth. These goals were established in part through community consultation, and consultation with the Environmental Advisory Committee (Quealey 2006).

More specifically, the strategy aims to deal with the following environmental areas: air quality, biodiversity promotion, reduction of resource consumption, energy use, waste production, greenhouse gas emissions and soil decline and erosion, preservation of natural habitats and contributing to the health of the urban forest (City of Ottawa 2003c)..

The Environmental Strategy consists of four main components: setting goals and corporate environmental commitments; strategic and program planning; corporate environmental action planning; and a target setting and monitoring process (City of Ottawa 2003c).

The Strategy also proposes sustainability commitments for the City as a corporation (City of Ottawa 2003c). This would include areas such as reducing greenhouse gas emissions, encouragement of green technology and innovation to demonstrate leadership in environmentally-friendly behavior, recognition of environmental leaders, incorporation of environmental costs into programs, policies and initiatives and using an ecosystem approach in the management and protection of natural resources.

And like all the other plans, specific initiatives were listed under the environmental strategy, including some that had already commenced. It was expected that departments would work together as much as possible on these different initiatives and on the overall vision of the plan (City of Ottawa 2003c).

Implementation and Monitoring

The five plans are the blueprints of the strategy, which include specific initiatives to achieve the goals of Ottawa 20/20. These initiatives joined the several which had commenced implementation when Ottawa 20/20 was released (City of Ottawa 2003a). The overall purpose of the City's implementation strategy was to link the Ottawa 20/20 Strategy to the city's current budget, decision-making, and long-term financial planning processes

In order to implement the growth management plan, the city suggested financial instruments such as incentives, exploration of new sources of income and user fees, strategic development of infrastructure where the city wanted to encourage growth, acquiring natural spaces to preserve them and encouraging mixed-use on land being sold to developers (City of Ottawa 2003a). The review and strengthening of regulations in order to fit with the Ottawa 20/20 plan was suggested, as was pushing the goals of the plan in development approval decision making. The city also outlined the importance of building partnerships with, and education of, the public, businesses and other stakeholders (City of Ottawa 2003a).

At the commencement of the strategy-formation process, each department evaluated itself for what implementation challenges they thought they might face (City of Ottawa 2003a). A communications strategy was to be developed to communicate to departments what they need to be doing to fulfill the requirements of the plan, as well as to communicate with the public and garner public input.

Financially, the city releases an annual budget that seeks input from the public and that will have considered the principles of Ottawa 20/20 at several different levels. In addition, the long range plan (2002-2011) was to be reevaluated in 2004 to include some of the Ottawa 20/20 initiatives, and discussed for approval in 2005 (City of Ottawa 2003a). The city acknowledged here that future years might still result in a budgetary shortfall, and that upper levels of government should be lobbied to contribute more funding to the city.

In the original Ottawa 20/20 planning documents, monitoring was to take place through an Ottawa 20/20 Report Card (City of Ottawa 2003a). This report card would

contain a series of indicators to show progress on the planning objectives. It was to focus on what has been done in the year to further the Ottawa 20/20 principles and if the combined efforts of all stakeholders, including the city, had been effective in furthering these principles (City of Ottawa 2003a). The report card was to list several quality of life factors that were to be established based on advice from advisory committees, the report card coordinators, outside experts, senior management, and interdepartmental groups. While dates were set for this, it is not clear if the report cards were actually designed.

Each department would contribute to the report card by self-evaluating through a report card coordinating group from their department (City of Ottawa 2003a). Data were also to be collected internally, as well as from external agencies, and in some cases, some primary data collection would occur if the other two sources were not considered sufficient.

Every five years, the entire Ottawa 20/20 plan was to be reviewed and revised to keep it current and allow it to meet changing priorities and challenges (City of Ottawa 2003a).

Challenges to Implementation

The city listed several challenges it anticipated in implementation (City of Ottawa 2003a). The first one was ensuring public involvement and participation, including public knowledge and involvement of the plans and initiatives and public willingness to change behavior (i.e. reducing resource consumption, etc.). The need for strong community participation is based on the community understanding the plan and terminology used. The plan also emphasized the importance of consultation with the city advisory committees.

There was also concern about financial constraints to implementation, and the need to gain funding from senior levels of government. The report authors commented that there would not be enough money to fund all the initiatives in Ottawa 20/20, and so “the community and City Council will have some difficult choices to make as implementation of Ottawa 20/20 moves forward” (City of Ottawa 2003a). This has proved to be true.

In the case of the long-range plan, for example, it was due to be reviewed in 2004, for the 2005 budget process, in order to make sure it was in line with the Ottawa 20/20 principles and initiatives (City of Ottawa 2003a). It was reviewed, and included initiatives that fell under the broad principles of Ottawa 20/20, such as affordable housing. The review even noted that background documents for the budget directions explained Ottawa 20/20, and linked existing programs to it, as were consultations on enhanced funding (Corporate Services and Economic Development Committee 2004).

It does not appear, however, that Ottawa 20/20 actually was the *cause* of enhancements to programs and initiatives. Rather, Ottawa 20/20 was simply linked up with what was already happening. In some cases, budget preparations for 2005 actually worked against the principles of Ottawa 20/20. For example, while enhancements to transit for the 2005 budget were mentioned, these enhancements were only part of the amount of money put aside each year to address growth in ridership (Corporate Services and Economic Development Committee 2004). There was no extra money provided specifically for Ottawa 20/20-related enhancement, and no reinstatement of transit reductions that had resulted from the 2004 budget.

Some of the broader themes/goals may be problematic to implement, because they transcend departments, and demand unusual cooperation. The plan stresses that it is essential for city council to encourage the whole corporation to be working together for a sense of responsibility for the long term (City of Ottawa 2003a).

The Corporate Plan

After the design of Ottawa 20/20 was completed, a Corporate Plan was put into place to outline medium-term actions that would help the City realize the 20/20 vision, establish council-approved priorities and outline priority areas for delivery of services and programs (City of Ottawa 2006a). It was to work towards improving existing city programs and services and creating new initiatives and opportunities.

Like the Ottawa 20/20 Vision, the Corporate Plan focuses on the quadruple bottom line of cultural, social, economic and environmental sustainability. The Plan contains eleven agenda items, incorporating council's directions, long range financial plans, results from a 2004 Citizen Satisfaction Survey, as well as input from businesses, citizens, communities and individual councillors (City of Ottawa 2006a).

Corporate Plan Agenda Items

- Public safety and health
- Prosperity
- Smart Growth
- Opportunity
- Environment
- Housing
- Neighbourhood
- Rural development
- Accountability
- Culture
- Service

Each agenda item has specific projects underneath it, and a justification for why each is important.

Many of the strategic directions of the Corporate Plan are linked to the seven guiding principles of Ottawa 20/20. Each department was provided with a framework, through the Plan, to help them create their business plans (City of Ottawa 2006a).

Each plan is to last for three years, with the first one for four years (from 2006-2009), and is up for review by Council and staff each year, just before the initiation of the

budget process (City of Ottawa 2006a). This review was to allow for flexibility, and every new version of the Plan must contain public input.

Under the Corporate Plan are business plans for each of four main City departments: Public Works and Services, Planning and Growth Management, Community and Protective Services and Corporate Services (City of Ottawa 2006a). These plans are based on the Agendas of the Corporate Plan and detail how Corporate Plan actionable items will be completed. Each item also lists a financial component of the anticipated cost for that year, usually a capital cost. They also contain other action items that may not have been contained in the Corporate Plan, but may still be related to the Agenda items. For inclusion into the budget, the plans are sent to council for discussion and approval (City of Ottawa 2006a).

Action items in the Corporate Plan were determined through a priority setting process that narrowed down the list from the several hundred originally-proposed options. Councillors picked their priority actions, and these were fit into financial envelopes. Public consultation was also carried out. The actions picked by councillors were to be pursued for the following three or four years (Whitehouse 2007). Due to the choices made by the councillors and the limited financial resources available, some action items, or even some of the eleven agenda categories may be left out of the Corporate Plan for those specific three or four years. The aim is that even though not all areas of 20/20 may be dealt with in one Corporate Plan, the ones that have been left off will become priority areas for the next Corporate Plan three to four years later, although there is no mechanism guaranteeing this (Whitehouse 2007).

The Corporate Plan is the level in the process where trade-offs in decision-making are met and dealt with (Whitehouse 2007). Councillors approve the Corporate Plan according to their priorities, which solidified these actions as a commitment to citizens. Each action item in the Corporate Plan is costed out, and fit into a financial envelope, thus ensuring that decisions about what will and will not receive funding has already been made.

In order to track what achievements are made in the future, a timeline for all actions in the plan has been created, as well as community impact indicators, which will use baseline data to see what effects the plan's actions have had on citizens. These indicators will affect all eleven agendas, and each agenda will have approximately five indicators. The plan will also be using the Ontario Municipalities Benchmarking Initiative to measure progress (City of Ottawa 2006a). This will be part of an overall performance measurement framework. The annual reports will track the results of these indicator studies and publish them each year.

“The City is committed to achieving all of the action items contained in the City Corporate Plan, in the timeframes indicated. No relative prioritization of action items has been provided in the Plan because all are equally important” (City of Ottawa 2006a).

Reporting on the Strategy

The report cards originally conceptualized in Ottawa 20/20 have been supplanted by the annual report. While some areas might have supplementary reports (e.g. environment), most of the reporting is contained in the annual report (Whitehouse 2007). This report lists the specific actions that have been achieved under each of the eleven agenda areas of the Corporate Plan, and they link to specific actions under each agenda. In order to

foster accountability, outcome indicators are used for each goal to quantify progress year by year, so that the public can chart the progress towards the goals and overall towards the 20/20 vision (Whitehouse 2007).

Budgetary Issues

While specific funding for Ottawa 20/20 is not set aside in the budget, the long range financial plan, which was approved in January 2007, sets out strategic initiatives and operating budget enhancements, both of which cover many of the 20/20-specific initiatives (Whitehouse 2007).

Everything in the Corporate Plan was budgeted into specific financial envelopes, meaning that there would be no question about them getting funding. However, this was established through the council in fall 2006. In November 2006, a new council and mayor were elected. This means that all items that were in the Corporate Plan are not guaranteed to stay there, as the new council has to put its stamp of approval on the budget. As a result, the draft budget that was released in February 2007 focused mostly on service reductions and cost reductions, a priority of the newly elected mayor (Budget 2007 Ottawa 2007). What this translated into was budget cuts, and no room for expanding programs.

Further, when the draft summary of the budget was released for public consultations, there was no mention at all of Ottawa 20/20 (Budget 2007 Ottawa 2007). The capital and operating budgets themselves, as approved by Council about a week later do not fare much better. In the operating budget, the Ottawa 20/20 vision is mentioned only once, in the mandate of the Planning, Transit and Environmental department (City of Ottawa 2007c). The capital budget mentions 20/20 in its service delivery section. It also notes that all Ottawa 20/20 initiatives, plus the entire strategy itself is to be budgeted for under the Strategic Initiatives section. However, it is not included in the Growth section, a poor sign for the Strategy, considering that Ottawa 20/20 was supposed to be the City's growth management strategy (City of Ottawa 2007b). This demonstrates that Ottawa 20/20's implementation is weak at best, its inclusion in the budget being inconsistent and minimal. Even if many of the intentions behind Ottawa 20/20 are translated through the Corporate Plan, it looks as though the Vision itself has been forgotten.

The Future of 20/20

The whole 20/20 process has been astoundingly complex and challenging. It strongly promotes public consultation, and took an often demanding route of including community input and community building into the process (Whitehouse 2007). It has made some groundbreaking progress that has rarely been found in other Canadian municipalities and the strategy has been considered a success by many city staff (Whitehouse 2007). It has become increasingly focused on public consultation and councillor input, and, while mistakes have been made, City staff claim it is constantly improving (Whitehouse 2007). City staff are now attempting to get council involved right at the start, rather than getting their opinion on a finished document.

Later this year, the city will be establishing a new process for creating the priorities and initiatives for each Corporate Plan (Whitehouse 2007). City staff will be pushing council to be more defined about their goals, starting with the annual report.

From the sixty goals or so, councillors will be asked to vote on their specific relevant priorities. From there, city staff will be present a range of actions for councillors to adopt that fit into those priority goals. Once this part of the process has been completed, there will be a further reduction of the list of initiatives in order to fit into the various financial envelopes tied to each general area and department.

As well, in the works currently (and over the next few years) is an exercise to look at what will happen after 20/20. It is called *Beyond 20/20*, which is currently in its preliminary stages. It aims to be a longer-term planning exercise that will push the city to become even more resilient and sustainable. It will involve not only the City of Ottawa, but also the City of Gatineau and the National Capital Commission, in order to include the entire national capital region (Whitehouse 2007).

The Sustainability Assessment Framework and the Ottawa 20/20 Strategy

In many ways, the Ottawa 20/20 strategy planning process was visionary, especially in its widespread inclusion of public input. The seven overarching principles of the original strategy embody many aspects of the sustainability assessment criteria. However, even though almost all the criteria are addressed to some minimal extent by the Ottawa 20/20 planning process and Corporate Plan, there are still some fairly substantive areas that are lacking.

Application of the Sustainability Assessment Criteria

Socio-ecological system integrity

Due to its Smart Growth base, the Ottawa 20/20 Strategy lends itself, through encouragement of decreased car use, increased density and greenspace, to a reduced negative impact on ecological systems (Downs 2005). The Smart Growth roots of the Strategy are carried forward into the Corporate Plan (City of Ottawa 2006a). The strategy also addresses socio-ecological system integrity through the Green and Environmentally-Sensitive City principle (protect greenspace, natural resources and ground and source water, improve air quality and reduce greenhouse gas emissions, improve ecosystem planning and design), and system integrity is, to an extent, considered in the environment strategy through its commitment to development according to sub-watershed locations.

At the same time, the growth strategy shows little understanding of or appreciation for complex systems. Though many environmental, social, economic and cultural issues are covered and linked through the seven overarching principles, in practice, their interlinkages are weak. For example, the economic strategy only “recognizes” the importance of greenspace preservation, but does not explain how this factors into decision making, and says that economic success includes environmental sustainability, but again does not explain how environmental considerations will be included in economic indicators (City of Ottawa 2003b). As another example, the Smart Growth and environment agendas from the Corporate Plan are only two of 11 different agendas, rather than being the basis for all agendas, and will not necessarily have action taken on them year to year if, for example, councillors decide to focus on other agenda

matters (Whitehouse 2007). As a result, the environmental and Smart Growth issues may be completely off the radar when council designates priorities.

Another important facet of socio-ecological system integrity is the interlinkage of community, ecology and health. While all these areas are covered singly in the Strategy, clear interlinkages are not present. What's more, the exploration of mutual benefits to all these areas, and the importance of looking at them in context with one another, is not a part of the Strategy. The Strategy does not provide for actions undertaken which understand these mutual benefits and deeply linked connections.

While there is some discussion of reducing human threats to system integrity (through environmental, social and health measures, plus the Smart Growth approach), system complexity is not explicitly addressed. It is acknowledged in the process that complexity in the systems does indeed exist (City of Ottawa 2003a), but there are few suggestions about how to tackle it. As well, there is no mention of the concept of the carrying capacity of the environment (the limit point of the system to endure stress or changes). It is not explained how and if carrying capacity will be determined, and if it is, how the City will ensure a buffer so that carrying capacity is not exceeded.

Livelihood sufficiency and opportunity

Livelihood sufficiency and opportunity are embodied, at least partially, in the Ottawa 20/20 principle of "a caring and inclusive city," which outlines the importance of access to basic necessities for all (City of Ottawa 2003a). In the Corporate Plan, the concept of opportunity is one of eleven agenda items. Sufficiency livelihood and opportunity are also addressed in part by the Corporate Plan's prosperity agenda, whose aim is overall prosperity increase (City of Ottawa 2006a). The prosperity agenda of the Corporate Plan, stemming from the "innovative city where prosperity is shared among all" principle of Ottawa 20/20 also aims to increase sufficiency.

The Economic Strategy of the 20/20 Strategy, along with the seven principles that make up the Ottawa 20/20 plan, aims, among other things, to connect people to opportunities (City of Ottawa 2003a, 2003b). The Economic Strategy seeks to improve economic performance and employment in the region, which may well increase sufficiency and opportunity through rural development, improvement of small businesses, creating a fitting workforce for employers and connecting people to opportunities (City of Ottawa 2003b). While on paper there is strong contribution to livelihood sufficiency and opportunity, this does not necessarily translate into action.

The 20/20 Strategy and Corporate Plan include many sufficiency and opportunity-enhancing initiatives, but the sufficiency and opportunity requirements have not translated into action. For example, although these initiatives were written into the plans, many of them were trimmed from the 2007 draft budget, which required 0% increased taxes, and thus a reduction in services and programs (City of Ottawa 2007a). If this draft were expanded into an actual budget, this means that sufficiency and opportunity would likely current level, or even decrease, leading to both current and future generations having a reduced opportunity to improve their situations.

As well, there is little linkage between the creation of employment and prosperity and the protection of the environment. This is not surprising, given the lack of integration of environmental sustainability in general into all aspects of the planning process. Since this sustainability assessment criterion is based on the idea that human

wellbeing is dependent on ecological health and vice-versa, the environment must be linked into any employment and prosperity initiatives in order to promote sustainability (Gibson 2005).

Intragenerational equity

Many of the principles, agendas and initiatives of the Ottawa 20/20 process were designed to work towards creating intragenerational equity, such as some of the examples discussed above. Indeed, the comprehensive public consultation processes used to create Ottawa 20/20, and the Corporate Plan increased intragenerational equity in terms of encouraging and facilitating democratic participation and highlighting community empowerment through community-based planning, public consultations and advisory groups and committees (City of Ottawa 2003a, 2006a).

The Corporate Plan's public safety and health agenda could well work towards intragenerational equity, as it moves forward initiatives that would decrease gaps in health between those in different economic strata (City of Ottawa 2006a). Similarly, the housing agenda promotes intragenerational equity through affordable housing initiatives. Through its poverty-reduction initiatives, the Human Services Plan works to reduce the intragenerational gap and generally increase quality of life, especially for underprivileged groups.

The Human Services Plan also strategically addresses diversity and disability issues through promotion, communication, focus on inclusivity, and policy statements on both issues (City of Ottawa 2003e). Women, children, aboriginal people and members of the lesbian, gay, bisexual, transsexual and queer community are also included in these strategic goals (in the sense of increasing equality and quality of life) and have specific policy statements. This is beneficial to intragenerational equity because these minorities are often marginalized in society, leading to an increased chance of poverty and reduction in opportunity.

The Strategy makes some strong commitments through its various plans. However, it does not follow through into the actual implementation. If these policy statements are to be effective, they must be linked up to all initiatives, as part of the decision-making process for what actions to take.

There is no guarantee here that the voices of women, aboriginals, persons with disabilities, the poor and members of the lesbian, gay, bisexual, transsexual and queer will be heard comprehensively in the decision-making process, even with the wide public consultation efforts that have and continue to occur. Although the voices of these minorities are required as part of the advisory committees, specific requirement for their inclusion in the grander scheme of public consultation in the planning requirement does not exist. And with the question of the future of the advisory committees, opportunities to hear specifically from these minority groups may be lost.

Intergenerational equity

Intergenerational equity, while not worded explicitly in any of the principles or agendas, is linked through the whole planning process, starting with the 20-year scope, and related to the final vision of a city that is increasingly environmentally and socially sustainable and equitable. This desire for a better future is embodied in the caring and inclusive city

principle of the Ottawa 20/20 plan, and generally in the aim of consistently improving City services and sustainability (City of Ottawa 2003a).

The Human Services Plan specifically addresses intergenerational equity through its definition of sustainability as “[t]he essence of sustainability is the drive to achieve and maintain a high quality of life both now and in the future...sustainability is balance - the balance between human needs and the ability of the natural and economic environments to support them” (City of Ottawa 2003e).

What is missing is a solid framework, or checkbox in the decision-making process that explicitly addresses taking future stakeholders’ concerns into mind. Further, there is no requirement to explain why a decision that reduces the opportunities and needs of future generations is taken. Even with the vision of the Ottawa 20/20 Strategy for a more sustainable, equitable future, the actions of City Council and the mayor on the draft budget, for example, where many sustainability-enhancing initiatives were financially cut, does not reassure that future generation’s needs will be enhanced, or even protected.

The growth management strategy and Corporate Plan must have a more distinctly integrated environmental perspective. This would inherently benefit, as this principle states that environmental benefits will most likely be beneficial to future generations (though clean air, better health, etc.).

Resource maintenance and efficiency

Resource maintenance and efficiency are covered in the Green and Environmentally Sensitive City principle (protect greenspace, natural resources and ground and source water, improve air quality and reduce greenhouse gas emissions, improve ecosystem planning and design), which outlines specific plans to reduce overall resource use (City of Ottawa 2003a). The Environmental Plan mandates the city as a corporation to reduce greenhouse gas emissions, use more environmentally-friendly technology, incorporate environmental costs into programs and policies and approach resource management with an ecosystem approach (City of Ottawa 2003c). The environmental agenda of the Corporate Plan also applies here, as it is first and foremost concerned with environmental sustainability.

There is certainly something to be said for these environmental components of both the Ottawa 20/20 approaches and those in the Corporate Plan. However, in the strategy and plan, resource conservation is seen as being on the same plane as socio-economic concerns, which means that the environment could lose out in a trade-off with one or more of these other areas. As well, these individual initiatives, while beneficial in certain areas, may not be consistent across the board, meaning that some environmental areas, if they do not have specific initiatives assigned to them, could lose out in protection or amelioration.

Another issue is that while there may be emphasis on reduction in resource consumption, there is no guarantee that any reductions in resource use would not be offset elsewhere in another initiative under the strategy that increases resource consumption, as, even though environmental values may be part of the overarching principles, they are not necessarily part of every decision made on each initiative that the City takes on.

As already discussed, while the Strategy addresses the need for livelihoods for all through various initiatives, these initiatives do not necessarily promote sustainable

livelihoods, and certainly does not link the creation of livelihoods to the reduction in resource use.

Socio-ecological civility and democratic governance

Public participation has been an essential aspect of the creation of Ottawa 20/20, and has been quite successful in generally including stakeholders in the design of the Strategy (City of Ottawa 2003a, 2006a). The plan was designed so that that much of the vision for the future through 20/20 would be implemented within communities, by citizens. This is emphasized by the “city of distinct, livable communities” principle, which encourages stronger, complete communities that are more dense and networked with public transportation (City of Ottawa 2003a). This is also true of the democratic participation and government accountability aspects of the “responsible and responsive city” principle, which is reiterated in the Corporate Plan.

In terms of the process itself, noble efforts have been made to include the public and councillors in the planning process. There are an enormous number of stakeholders, and the city worked to get the public into discussion through forums and focus groups, citizen satisfaction surveys and general consultation (Whitehouse 2007). Extrapolating all ideas from public consultations into a common vision was challenging enough, but the councillors also needed to have their say, and that added another level of complexity. This is a big part of what the 20/20 process was about – the city acting not just to make a more sustainable future, but also to encourage citizens to take part in the process and take action themselves.

The citizen advisory committees, made up of citizens appointed by the city, also played an extremely important role in both the Ottawa 20/20 initial plan and the Corporate Plan. However, these committees have been temporarily suspended and are currently under a review that will be completed in 2008 (Whitehouse 2007). Their future is unknown, and if they are dramatically changed or abolished altogether, this could have serious consequences for public consultation strategies carried out by the city. It would result in a loss of a critical voice, especially in the case of the Environment Advisory Committee.

In the 2006 budget, almost \$1.3 million earmarked for environmental initiatives was cut from the budget (Ecology Ottawa 2007). These cuts were strongly condemned by the Environmental Advisory Committee, which pointed out that the cuts would put all work on the environmental initiatives at a lower priority, due to lack of funds (Environmental Advisory Committee 2006). The committee then advised the City to put the funds back in the budget, and made a strong statement about the City’s responsibility to the environment and to its own Ottawa 20/20 Strategy. It remains unclear however, whether or not these recommendations had any effect, as it is not mandated in the decision-making process that the comments of the advisory committees be addressed in final decisions.

The other aspect of this principle that is missing is the integrated use of market, customary, personal decision-making and administrative practices in order to foster sustainability (Gibson 2005). Certainly there are some initiatives that follow under each of these four practices to enhance sustainability, but they are not integrated, and like many other aspects of the Strategy, are inconsistent.

Precaution and Adaptation

The Corporate Plan is to be rewritten every four years in order to facilitate changing opinions and new councils coming in, as well as new public consultations (City of Ottawa 2006a). This way, the plan is adaptable to changing priorities of citizens, council and other stakeholders. At the same time, the principles of Ottawa 20/20 are supposed to be maintained throughout each revision, to allow for measurable outcomes over the long term.

However, in terms of ecological integrity and uncertainty and allowing for flexibility, the Strategy is lacking. As previously mentioned, there is no regard for not only the respect of the limits of the carrying capacity of the environment, but the lack of inclusion of assurance that a buffer will be included in any ecologically-significant decisions made, in order to ensure that the capacity will not be exceeded. What this means is that decisions on ecological issues taken under Ottawa 20/20 and the Corporate Plan are in danger of exceeding the natural carrying capacity, and could cause permanent ecological loss.

Even if carrying capacity were included in the Strategy, the precautionary principle is not a consideration in decision making. As such, decisions on various initiatives that have an uncertain ecological effect may well go ahead, even though their proceeding might have a damaging effect on the environment. The damaging of the environment might not be intentional, but without taking precaution to avoid negative ecological effects, the chances of this happening are seriously increased

Immediate and Long-Term Integration

True start-to-finish integration is lacking in the Ottawa 20/20 Strategy. Certainly, the intention for integration of the seven overarching principles into each initiative is there, but the follow-through is not. There is no specific framework or set of checkboxes to make sure that each initiative meets the seven principles or even addresses them. As an example, each item listed for consideration for the Corporate Plan has a financial tie, but no tie to any other aspect of the principles (e.g. social and ecological) (City of Ottawa 2006a). This lack of integration is not helped by the strategy's quadruple bottom line approach, which promotes a balancing of ecological, social, cultural and economic over a positive net gains and mutually-supportive benefits approach. This lack of integration and consideration of a broad spectrum of factors is ultimately the weakest part of the Ottawa 20/20 Growth Management Strategy.

Other Sustainability Issues Facing Ottawa 20/20

Besides insufficient adherence to these specific sustainability criteria, 20/20 contains other marked weak areas. For one, there is little attention given to addressing trade-offs, a fundamental part of sustainability assessment and an important accountability enhancer and decision-making tool. It is assumed that tradeoffs in Ottawa 20/20 are worked out through the planning process (Whitehouse 2007). By the time initiatives have been placed in the Corporate Plan, funding has been set aside for them, and in the final Corporate Plan, initiatives are concrete and fully funded, meaning that no decisions have to be made as to which ones stay and which ones go. Before they get to this stage, the hundreds of initiatives do have to be narrowed down (due to financial constraints). This is

done according to the will of the city councillors, based on their varied priorities, and what funding is available for them.

What is lacking here is a process for careful comparative evaluation of the competing options and the trade-offs to be made. There are no guidelines on how to determine an acceptable environmental, cultural, social or economic sacrifice. Since these plans are enormously complex, there are bound to be clashes between different priority areas. Environmental concerns are likely to run up against economic priorities, and social initiatives could easily be sacrificed due to lack of funding, and there is no method of deciding how to address this. As well, there are no determinative factors as to which initiatives stay and which ones go. As a result, social and environmental harm could inherently occur with even one poorly thought-out decision.

There is a desire to eventually get to quantifiable targets, which will increase accountability by communicating measurable results (Whitehouse 2007). However, this is exceedingly difficult due to the complex and integrated nature of many of the issues. For example, an air pollution target might be difficult to reach because actions fall under federal, provincial and municipal jurisdictions, and may be affected by locally uncontrollable factors (Whitehouse 2007). To ease this complexity, city staff perform legislation scans, and this will help them in setting targets, as it gives them an idea of the policy environment for certain issues. Some less complicated, more controllable targets, such as ambulance wait times, have already been set. The use of indicators is a trend the city would like to follow, as it increases accountability through exposing the public to what the city is trying to achieve. It is a good approach, though the results of these indicators must be linked into the Corporate Plan as it evolves, otherwise their usefulness is negligible. The other issue here is that the choice of indicators is endless. As such, the City will have to decide which indicators are important, and embark on a process of how to choose which indicators to use.

Inconsistency of continuity is another major weak spot in the Ottawa 20/20 strategy and ensuing planning process. Theoretically, the seven overarching principles of the original strategy were supposed to be kept in mind when designing the corporate strategy (City of Ottawa 2006a). It is true that there is some overlap (for example, between the environment strategy of Ottawa 20/20 and the Corporate Plan's environment agenda), but there are also several disconnects between the strategy and the Corporate Plan. For example, Smart Growth was the major founding framework of Ottawa 20/20 but has now been relegated to only one of eleven criteria in the Corporate Plan. This is repeated in the Capital and Operating budgets, where out of a total of almost 900 pages, Ottawa 20/20 is mentioned a total of five times (City of Ottawa 2007b, 2007c).

The problem of inconsistency also exists in the general decision-making process. Since councillors will eventually be choosing their priority items, some initiatives will be left off the agenda for any given four-year cycle of each Corporate Plan. Theoretically, those initiatives that have been left off, or areas that have been neglected will be picked up in the next Corporate Plan, and so on, until all Corporate Plan agenda areas and/or 20/20 priorities have been advanced or achieved entirely (Whitehouse 2007). However, this may actually work against establishment and implementation of sustainability, as there are certain areas of Ottawa 20/20 and the Corporate Plan that will lead to significant negative effects if they are ignored for four years. This is the case, for example, with environmental projects under the environmental agenda (City of Ottawa 2006a). If they

are left off the funded projects list for four years, the result could be that environmental protection would remain stagnant, and environmental destruction could get worse.

Further, there is no guarantee that initiatives commenced in one cycle of the Corporate Plan will be continued in the next cycle due to changing priorities of councillors, and the election of new councillors with new priorities every four years. This means two things: one, all hard work in one area may be lost if its project is simply dropped of the agenda in the next cycle. Two, this approach does not take into consideration that there are certain areas within the strategy for which it is essential that funding not only be continued, but that the services are also continually improved, due to growth, such as affordable housing and transit, at minimum to maintain the status quo. Improving them necessitates increased funding, but this approach does not take this into consideration.

The plan is also subject to the whims of whichever elected representatives are currently in power. It is essential that these representatives have a major say in the process, as they are the democratically-elected representatives, but poorly-informed decisions could have severe environmental and social costs, as was recently demonstrated in the 2007 draft budget released by the city, which focused on how costs could be reduced over any other consideration, and left little room for improvement of services, let alone new, innovative approaches and services, much to the chagrin of social service and community groups (City of Ottawa 2007a).

The budget process as it exists now, may also work directly against the goals of Ottawa 20/20. In the draft budget, for example, in order to reach a 0% tax increase as promised by the mayor, one proposal to reduce expenses, “gapping” for unfilled city positions, was suggested (Budget 2007 Ottawa 2007). Essentially, this means that instead of filling a position that has become vacant right away, the department will wait a few months, thus not having to pay a salary. Unfortunately, this means departments will become stretched and less able to fulfill their obligations. Moreover, it means less service for the city and for areas such as environmental and health inspectors, this could have disastrous consequences.

As city Councillor Diane Holmes said: “Reality check: the budget does not always reflect the official plan.” (City of Ottawa 2007a).

Conclusions

Working Sustainability Assessment into Ottawa 20/20

A great deal of time, effort and expense has gone into the creation of the Ottawa 20/20 Strategy, with varying levels of success. Public consultation has, for the most part, been excellent, and the sentiment behind the strategy was certainly genuine in wanting to create a more socially, environmentally and economically sustainable city. But the Strategy has failed in its implementation, and it is unlikely that the City’s desired future of “a more compact, efficient, equitable, affordable and environmentally-healthy city, one that affords a high quality of life and offers its citizens a range of lifestyle and travel choices” (City of Ottawa 2006a) will be reached by the year 2021, if the City continues on the path it has been on for the past few years.

It would not be practical, or desirable, to redo all of the good work that has been carried out for the Ottawa 20/20 Strategy and Corporate Plan in order to fit them into a sustainability assessment framework. But the Strategy could benefit from some of the approaches taken by sustainability assessment. This would ensure not only a stronger, more focused ecological approach, but also result in a better chance of achieving a truly sustainable, equitable society.

The 20/20 Growth Management Strategy uses the four-pillar quadruple bottom line approach, which in theory gives more weight to social and environmental issues than a more traditional economic-based approach. However it tends to separate, rather than integrate the different pillar areas (Gibson 2005). Reaching for a balance rather than a mutually-beneficial result can also end up enabling decision-making that is ecologically harmful. Taking instead a sustainability approach would be extremely beneficial to the strategy, as it would avoid these pitfalls, focusing instead on an entirely integrated approach that enables multiple ecological benefits in a variety of areas.

The Ottawa 20/20 Growth Management Strategy and its following Corporate Plan are weakest in the medium and long-term integration of the criteria of sustainability assessment and the integration its own overarching principles. This is a big problem because this integration is the final step in sustainability assessment that ties everything together, renders it most effective, and gives it strength for long-term viability. The very concept of sustainability encourages integration, and without this, it will be nearly impossible to achieve a sustainable society. Focusing on the integration criterion would also take the focus off the “balancing” act of the quadruple bottom line, and switch to a positive gains strategy that would go beyond minimizing ecological and social harm to promoting initiatives for ecological and social enhancement.

As mentioned, a new strategy is going to be taken regarding decision making on what initiatives to include in each Corporate Plan. It will encourage councillors to think more about the priorities they want to see established within the financial framework available to them. This new approach provides an excellent opportunity to adopt sustainability assessment practices. Before the initiatives are presented to councillors to choose from, each initiative should be evaluated through the sustainability assessment criteria and then presented to council. The evaluation should also involve the advisory committees, who can play an integral role in the evaluation and provide useful comments. This would ensure that each initiative would be presented with their full (i.e. environmental, social, economic) positive and negative consequences. As a result, the basis for comparative evaluation being presented now - which centres on what the economic costs are – would be greatly expanded. It would allow councillors to make more informed decisions about which initiatives to adopt, and would bring greater accountability, because the public could see what the councillors adopted, knowing the full consequences, and the councillors would have to provide justification as to why they made the decisions that they did.

This could also apply when the council is looking to reduce spending in general. Council could be made fully aware of the possible benefits that would be lost by cutting back on certain programs or initiatives. This would allow them to make decisions that are more accountable to the public and hopefully more in line with the aims of sustainability assessment and those of the Ottawa 20/20 Growth Management Strategy. In the long run, applying sustainability assessment could actually save money.

Sustainability assessment is designed to increase efficiency (Gibson 2005), and would likely help the City avoid having to repeat initiatives that had not received funding in one corporate cycle, only to realize later on that the effect of this led to serious environmental and social damage that has to be now repaired.

Sustainability assessment would also give the planners and decision makers involved in growth management in the city a tool for addressing trade-offs. Adopting clear, strong trade-off rules, would increase the basis for accountability, one of the agendas of the Corporate Plan, as citizens get explicit justification from council and the city on why trade-off decisions were made. The trade-off rules would also ensure the minimum amount of ecological harm done and would, in most cases, promote positive ecological and social effects. Finally, applying the sustainability assessment tradeoff rules would enhance protection of future generations, which is an, if not the, essential factor in sustainability.

A Better World? The Repercussions of Municipal Sustainability Assessment

Sustainability assessment is the next major step in planning ecologically-, socially- and economically-positive initiatives and communities. The City of Ottawa, in its Ottawa 20/20 Growth Management Strategy, is attempting not only to handle the rapidly expanding population of its city, but also to create a world-class, environmental and socially caring city. While the strategy makes a noble effort, it will not be able to achieve this if it continues in its business-as-usual approach.

Using a sustainability-based approach would greatly help the City reach its future vision. It would put the City of Ottawa in the forefront of remarkable sustainability approaches, and act as an excellent example of how ecological, social and economic goals can and should be integrated into the decision-making process. Moreover, it would enable the City to achieve its admirable goal of a caring city with a high quality of life that encourages equitable prosperity, strong civic participation and a true commitment to ecological sustainability, resulting in better health and happiness for future generations.

On a larger scale, the implementation of sustainability assessment as the foundation of growth management and planning strategies could usher in a new era of sustainability-centred development. It would encourage sustainability-based decision making and awareness. On the local scale, this could result in healthier, more participatory and equitable communities, while on a global scale, there would likely be a much smaller ecological impact, plus a notable reduction in poverty and inequality. If Ottawa were to become such a pinnacle of sustainable planning, this well might have larger ramifications for local, Canadian, and even international municipalities. There is a potential here to create a common basic approach towards sustainability implementation that could be applied at various scales, in various locales, being altered to take into consideration local issues, concerns and visions.

The world can no longer afford to consider environment as simply one factor among many in the decision-making process. We must commit to real sustainability, and consider environmental, social, health, intragenerational and cultural ramifications with every decision made, if we are to give our children a world that is as healthy, or perhaps even more so, than the one we live in now. Comprehensively applied sustainability assessment, especially at the local level, could be the answer to creating a healthier, stronger, and better world not just for us, but also for generations to come.

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