

Planning for Sustainability

Towards Integrating Environmental Protection into Land-Use Planning



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**A Discussion Paper
Prepared for
the Royal Commission
on the Future of the Toronto Waterfront**

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June 1991





Royal Commission on the Future
of the Toronto Waterfront

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12

Royal Commission on the
Future of the
Toronto Waterfront



Commission royale sur
l'avenir du
secteur riverain de Toronto

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L'honorable David Crombie, P.C.

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Ronald L. Doering

Dear Colleague,

I am pleased to enclose a copy of
*Planning for Sustainability:
Integrating Environmental Protection
into Land-Use Planning.*

This report reflects the opinions of the authors and not of this Commission. Nevertheless, the document deserves close attention because it considers future options and opportunities in a vital area. It should serve to stimulate and focus discussion on environmental protection and land-use planning issues, which are important to this Commission and to anyone seeking an environmentally better quality of life.

I look forward to hearing from you.

Cher collègue,

J'ai le plaisir de vous faire parvenir ci-joint un exemplaire du rapport intitulé *La planification pour la durabilité: l'incorporation de la protection environnementale à la planification de l'utilisation des terres.*

Ce rapport représente l'opinion des auteurs et non celle de la Commission. Le document mérite néanmoins une attention soutenue, car il étudie des options et des possibilités futures dans un domaine vital. Il devrait aider à stimuler et à diriger la discussion sur les problèmes de la protection environnementale et de la planification de l'utilisation des terres qui sont importants à la Commission et à tous ceux qui recherchent une meilleure qualité de la vie au point de vue de l'environnement.

En espérant recevoir bientôt de vos nouvelles, je vous prie, cher collègue, d'accepter mes plus cordiales salutations.

David Crombie

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INTRODUCTION

In its final report, *Our Common Future*, the World Commission on Environment and Development (the Brundtland Commission) dramatically focused world attention on the need to integrate environmental and economic planning. In response to Brundtland, Canada's National Task Force on Environment and Economy emphasized the urgent need to improve existing processes of decision-making and, in particular, to integrate the environment and the economy. Nowhere is this need more vital than in environmental and land-use planning. Regrettably, the importance of this area has not resulted in the study and discussion that it warrants.

Failure to provide a policy and regulatory framework that adequately integrates environmental and land-use planning produces particularly acute problems in regions under environmental stress at the same time that they are subject to strong population growth pressures. The Royal Commission's review of conditions in the Greater Toronto region, summarized in its second interim report, *Watershed*, concluded that this region suffers from both of these forces:

Rivers, creeks, and the lake are polluted and unfit for swimming, and cannot be used for drinking water unless they are treated. Persistent organic chemicals and heavy metals are found in the air, water, wildlife, and soils of the region. The pressures of development continue to pose a threat to wildlife habitat and species diversity. Landfills are nearing capacity and more sewage and stormwater run-off is generated than can be treated effectively. Transportation networks are at, or above, capacity. Prime agricultural land and green space are being lost to apparently relentless urbanization, and the Oak Ridges Moraine, a precious resource for groundwater, wildlife, and open space, is threatened.

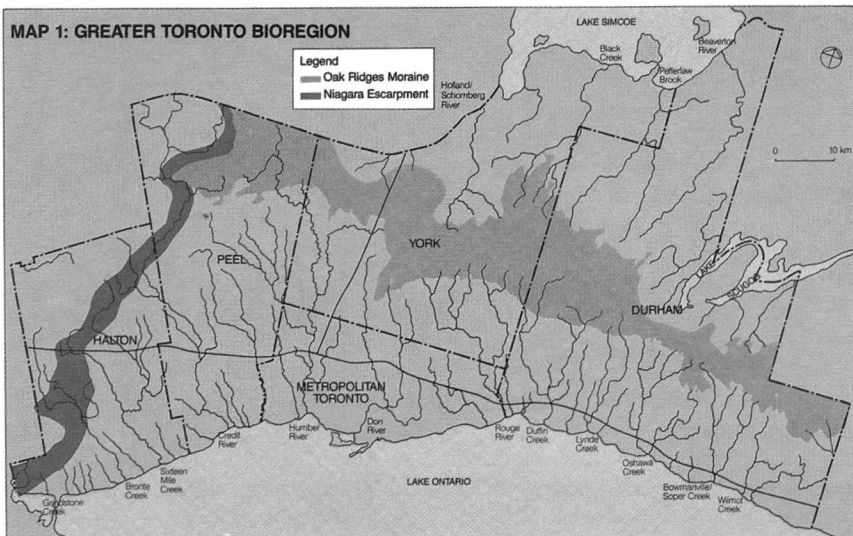
At the same time, the region must cope with strong development pressures that will likely increase in the coming decades. Projections are that the population of the Greater Toronto Area will grow from 3.73 million people in 1986 to 6.02 million in 2021. In 1986, about 25 per cent of the area — 1,524 square kilometres (376,400 acres) — was urbanized. If development patterns continue in the current form, expected population growth would

urbanize an additional 900 square kilometres (223,300 acres) of land by 2021.

Even with the most compact development pattern (as outlined in the *GTA Urban Structure Concepts Study*, a further 350 square kilometres (87,400 acres) of land will be urbanized. Does anyone think that, at this time, we have the comprehensive, integrated systems of decision-making needed to ensure that these lands are developed in an environmentally sustainable way?

As the work of the Royal Commission on the Future of the Toronto Waterfront has progressed, it has become abundantly clear — both from the evidence of deputants and from the Commission's own studies — that the present system of land-use planning and environmental management doesn't offer even minimal environmental protection, let alone the "ecosystem approach to restoring and regenerating the Greater Toronto Bioregion" advocated in *Watershed*.

The word "system" is itself a misnomer. Existing legal and administrative arrangements do not form a system at all but, rather, are a diverse and largely unrelated collection of procedures carried out under different pieces of legislation for which different provincial ministers are responsible. Furthermore, land-use planning exists within a framework of municipal boundaries that bear little relation to a unified bioregion or, indeed, to any kind of ecological or physiographic entity.



The land-use planning “system” is also failing to facilitate the economic development needed to build homes and provide jobs. At present, there are a variety of provincial initiatives to encourage municipal governments to increase the passage of developed land through the land-use approval process, which would increase housing stock and thus temper the upward push on land and lot values. For example, the Province has moved toward mandatory targets for affordable housing as part of approved plans for subdivision and housing projects, in order to increase opportunities for entry-level home buyers and families with moderate incomes. However, although the provincial government has been working on ways to streamline the approval process and make it more efficient, there have not yet been any significant structural reforms that would make it easier to implement the housing initiatives.

The means to improve the planning process to provide more efficient, timely, and consistent development approvals are beyond the scope of this paper. However, we recognize that, first, such improvements must be included in any effort to reform the system and, second, improving the way environmental considerations are included in land-use planning should help ensure that this part of the process is more efficient and predictable for all concerned.

No matter what system is eventually devised, the political decision-making process will ultimately determine the priority given environmental considerations — along with economic, social, and other issues — when evaluating plans and projects. Problems in the current planning process (described in Chapter 2) result in environmental issues generally not being considered or not considered in a proper framework, but these must be brought more systematically into the process so that decision-making, and the trade-offs it involves, can be undertaken on a more informed and knowledgeable basis.

Because the existing legal, institutional, and administrative structures and mechanisms simply do not provide a means to implement the Commission’s earlier conclusions and recommendations, the fourth recommendation in *Watershed* recognized the need to review “the ways in which the philosophy and principles of the ecosystem approach could best be integrated into the

Planning Act and other relevant provincial legislation, as it affects the Greater Toronto Bioregion”.

This report begins that examination.

While there is some consensus on the nature of the problem, there is very little consensus on solutions. Discussions with members of various interest groups, undertaken while preparing this paper, forcefully underlined divisions even among the authors. Municipalities, the provincial government, environmentalists, and developers lack a common vision that would guide reform. A legacy of mistrust, lack of communication, and deep philosophical differences combine to undermine collaborative approaches.

However, the need for sustainability of our region requires that we strive to find some common ground, however modest. Given that existing processes cannot cope with the current environment and development pressures — to say nothing of the pressures to come — all the current talk of the mutual interdependence of environment and the economy will remain that — just talk — unless we can find ways to better integrate environmental and land-use planning.

The main objective of this report is to provoke informed discussion on this important subject. Chapter 1 outlines the existing land-use planning and environmental assessment process in Ontario. Chapter 2 describes various problems in the current system and concludes that it requires reform. Chapter 3 presents some general principles that could be used to better integrate environmental considerations into land-use planning in a fair and consistent way. Chapter 4 concludes that a comprehensive public inquiry is needed to study and consult on the issues before any recommendations can be made to government on whether and how a fully integrated system could be developed.

Because we cannot afford, either environmentally or economically, to have all reform await the minimum two or three years that would be involved in conducting such an inquiry, Chapter 4 also suggests some modest reforms that could be introduced within a matter of weeks or months. Chapter 5 offers draft terms of reference for the proposed public inquiry on possible longer-term solutions.

We need to plan on a more regional basis, using an ecosystem approach. Unless we find ways to better integrate environmental and land-use planning, the prospects are limited for promoting environmentally sustainable economic development adequate to the needs of our region during the next decade. While the authors do not pretend to offer all the answers to the key regulatory need of our times — how to integrate environmental and economic decision-making — we hope we have provided a beginning.

CHAPTER ONE

THE LEGAL FRAMEWORK

In 1944, with the end of the Second World War in sight, there were idealistic visions of a better and brighter world, in Ontario as elsewhere. This was reflected in the provincial government's decision to establish a Department of Planning and Development, with a broad mandate to plan the economic and physical development of the province.

Like most of the rest of Canada, however, Ontario soon had to cope with more immediate problems — pressures for massive urban growth unleashed by the war's end, and the need for legal tools to regulate this growth; in response, the provincial government passed its first comprehensive Planning Act in 1946. While the new Act incorporated many features of the 1917 Planning and Development Act, it provided, for the first time, a statutory basis for land-use planning throughout the Province.

While the Planning Act was designed primarily as a regulatory instrument, it was originally administered by the Minister of Planning and Development so that it could be applied within the framework of what would later be termed a provincial development strategy. No such strategy ever appeared, however, and the Department survived only until 1960. At that point, responsibility for administering the Planning Act passed to the Minister of Municipal Affairs, with whom it has remained (apart from a brief interlude in the early '70s) ever since.

Between 1966 and 1975, under the so-called "Design for Development" program, the provincial government actually began to develop broad-scale regional planning strategies (including the Toronto-Centred Region [TCR] plan of 1970) that would, among other things, provide a framework for local planning. Initially "Design for Development" had no statutory foundation, a deficiency remedied in 1973 when the Ontario Planning and Development Act (not to be confused with the similarly named predecessor of the 1946 Planning Act) was passed.

This Act, which provides for the preparation and formal adoption of provincial plans, was never put to general use, although it provides the basis of the Niagara Escarpment and Parkway Belt legislation. Beyond that, it is probably unworkable in practice in its present form: the adoption and amendment procedures it estab-

lishes are too complex. However, the Act remains on the books as one of the few tangible legacies of the "Design for Development" program, which was wound up shortly afterwards.

A lengthy review process that led to a substantial report by the Review Committee and then a white paper resulted in a "new" Planning Act in 1983. In reality, the Act was not so much a radical rethinking of the aims and substance of municipal planning (which had been attempted in other provinces) as a revised version of the 1946 Act that did incorporate some significant modifications and additions. These include a requirement (Section 2) that the Minister, in carrying out responsibilities under the Act, should "have regard to" a number of specified "matters of provincial interest". Among these are "the protection of the natural environment, including the agricultural resource base of the Province, and the management of natural resources", "the protection of features of significant natural, architectural, historical archaeological interest", and "the supply, efficient use and conservation of energy".

The new Act also included provision for promulgating provincial "policy statements" that both municipalities and provincial agencies must "have regard to" in exercising any planning-related authority (Section 3), and that may require municipalities to amend their official plans in order to conform to such policy statements.

Policy statements have since been adopted on flood plains, aggregate extraction, and housing, although draft statements on "foodlands" and wetlands have not so far been given Cabinet approval. The 1983 Act also enables the Minister to declare a "provincial interest" in an official plan matter before the Ontario Municipal Board (OMB), which has the effect of requiring Cabinet approval before the plan or amendment can take effect.

Essentially, however, land-use planning in Ontario in 1991 remains what it was in 1946: local in jurisdiction, ad hoc and regulatory in application, functioning outside any comprehensive framework of provincial land-use policy. In the absence of such a framework, the role of the OMB has become that of the ultimate arbiter of "good planning" in most important local planning decisions.

The history of Ontario's Environmental Assessment Act followed quite a different course. Environmental impact assessment (EIA) as a distinct, systematic process was born in the United States, where the National Environmental Policy Act of 1969, reflecting a growing public concern over environmental degradation, introduced EIA into the planning of projects carried out under federal government auspices. Four years later the idea was borrowed by the Canadian government which, by Order-in-Council, established the Environmental Assessment and Review Process (EARP). (The federal government has recently published draft legislation that would embed the process in statute law.)

Shortly after the inception of EARP, the Government of Ontario published a green paper on EIA, and in 1975 it enacted its own Environmental Assessment Act. This legislation was intended primarily to correct limitations of the Environmental Protection Act but, in part, it was designed in recognition of the fact that major public projects were not subject to control under the Planning Act.

Ontario's Environmental Assessment Act may be unique in the breadth of its definitions of both "environment" and "undertaking", making virtually any activity potentially subject to scrutiny. However, in practice it has not so far been applied to private-sector undertakings except in a few specific instances, while a large number of public-sector undertakings have been exempted. An application may be accepted or rejected by the Minister of the Environment, but any major undertaking is likely to be referred to the Environmental Assessment Board (EAB) for decision.

In cases where a proposal is subject to approval under both the Environmental Assessment Act and the Planning Act, a Joint Board may be set up under the Consolidated Hearings Act.

However, this statute is the only formal acknowledgement of the link between land-use planning and environmental assessment. The 1975 Environmental Assessment Act did not recognize the fact that a statutory process for regulating land use already existed and, while the 1977 report of the Planning Act Review Committee (17.20 - 17.35) commented at some length on the relationship between the Planning Act and the new Environmental Assessment

The Planning Act and the Environmental Assessment Act: A Comparison

Note: The information in this table is highly generalized for purposes of comparison. For detailed and accurate information, reference should be made to publications of the ministries of Municipal Affairs and the Environment.

"Planning" refers to the official plan unless otherwise specified.

| | Planning | Environmental Assessment |
|---------------------------|--|--|
| Statutory Purpose | "[P]rimarily to provide guidance for the physical development of a municipality [or unorganised area]...while having regard to relevant social, economic and environmental matters" (Plg Act, 1 [h]) | "[T]he betterment of the people of the whole or any part of Ontario by providing for the protection, conservation and wise management in Ontario of the environment."(EA Act, 2) |
| Responsibility | The municipal council, subject to the approval of the Minister of Municipal Affairs or, where applicable, of the regional council, and subject to appeal to the Ontario Municipal Board (OMB). | The Minister of the Environment, who may delegate to the Environmental Assessment Board (EAB); EAB decision subject to alteration by Cabinet. |
| Application | All land use under municipal jurisdiction (excludes land and operations of the provincial and federal governments). | (At present): all operations ("undertakings") of the provincial and municipal governments and their agencies over a certain value, unless exempted by the Minister; private undertakings only if expressly designated by the Minister. |
| Approval Procedure | <p>A proposal to change land use or carry out any other operation does not require an approval procedure under the Planning Act if it is in conformity with the current official plan and other instruments, notably the zoning by-law. This is usual in the case of minor operations, but exceptional for large development projects. The following is a summary of the procedure if an official plan amendment is required (additional steps may be required in some circumstances):</p> <ul style="list-style-type: none"> • Municipal staff review proposed amendment | <p>Approval procedures vary according to circumstances; the outline below applies to the most elaborate.</p> <ul style="list-style-type: none"> • Proponent submits environmental assessment (EA) of proposed undertaking to Minister • Ministry reviews EA; 30 days allowed for public review • Minister accepts EA, refers to EAB (or Joint Board, if undertaking also subject to OMB approval) |

| | | |
|---------------------------------------|---|--|
| Approval Procedure (cont'd) | Planning | Environmental Assessment |
| | <ul style="list-style-type: none"> • Public meeting • Council adopts amendment and submits to Minister or regional council • Amendment approved, or (if substantial) usually referred to OMB • Minister may declare provincial interest • OMB hearing (or Joint Board if application also subject to EA) • OMB (or Joint Board) decision, if no provincial interest declared | <ul style="list-style-type: none"> • 15 days allowed for further public review, followed by EAB (or Joint Board) hearing • EAB (or Joint Board) decision (approval, approval with conditions, refusal) • Board decision may be altered by Cabinet within 28 days |
| Technical Procedure | <p>The Planning Act does not stipulate the procedure to be followed in <i>preparing</i> an official plan or major amendment. The outline of a "text-book" sequence of steps, each involving interaction among the planners, the municipal council, and the public, is:</p> <ul style="list-style-type: none"> • Identify and evaluate issues and problems • Determine goals • Identify options to reach goals • Select preferred option • Draft plan • Final plan • Approval (see above) • Plan implementation • Monitoring of implementation and effects • Review and revision | <p>The following is an amplification of the procedure established by the EA Act for carrying out and following up an EA:</p> <ul style="list-style-type: none"> • Establish the need or rationale for the proposed undertaking • Identify alternatives to the proposed undertaking • Assess environmental conditions • Identify alternative means of carrying out the undertaking • Assess the environmental effects of the undertaking • Identify means of preventing, mitigating or compensating for adverse effects • Prepare EA • Approval (see above) • Monitoring of effects • Corrective measures |

Act, these observations were not reflected either in the subsequent white paper or in the 1983 Planning Act.

As a result, Ontario now has two statutes and two sets of administrative and quasi-judicial procedures broadly related to regulating land use, with no formal provision for co-ordination, apart from the Consolidated Hearings Act.

Depending on its nature and location, a development proposal (or undertaking, in the terminology of the Environmental Assessment Act) may be subject to a considerable number of statutes other than the two so far discussed:

- It may be affected by the Environmental Protection Act.
- If it is within the area subject to the Parkway Belt Planning and Development Act, it will be subject to that statute.
- If it is within the Niagara Escarpment Planning Area, it will be subject to the approval of the Niagara Escarpment Commission under the Niagara Escarpment Planning and Development Act.
- If it affects a lake or watercourse, it will be subject to regulation under several statutes, including the Ontario Water Resources Act, the Lakes and Rivers Improvement Act, and the Conservation Authorities Act, as well as the federal Fisheries Act.
- It may be affected by provisions of the act establishing the regional municipality in which it is located.

This does not, by any means, exhaust the list of statutes that, according to circumstances, may have to be taken into account in the planning, design, and development of a large project.

Despite the complexities created by Ontario's particular body of law, the parallel existence of land-use planning and EIA procedures is not inherently wrong in principle. Indeed, the contrary is true: conceptually the two processes complement each other very well. The Planning Act provides the context of broad, anticipatory policy and general regulation of land use, while the EIA provides detailed evaluation and the specific terms and conditions for individual development projects within that context. Problems arise

because the two statutes were developed in isolation from one another, and do not work together to provide an integrated, comprehensive system for environmentally sound planning.

CHAPTER TWO

THE NATURE OF THE PROBLEM

Although it is generally agreed that land-use planning processes in Ontario are not providing adequate environmental protection, there are many different views of the nature of the problem. Environmentalists are concerned about the deterioration of the natural environment: loss of valuable natural areas such as wetlands, woodlands, and river valleys; disappearance of prime farm lands and rural landscapes; pollution of rivers; depletion of aquifers; and so on. Provincial and municipal governments are subject to conflicting demands for the use and protection of land, air, and water, but lack adequate resources to respond. Developers are concerned that environmental requirements are not clearly specified and that the processes being used to seek environmental protection create delays, increased development costs, and reduced options.

What are some of the specific weaknesses of the existing planning processes with respect to environmental protection? This chapter examines existing planning law and practice and provides a foundation for the options for improving land-use planning processes discussed later. The problems are described under the following headings:

- purpose of the Planning Act;
- the Province's role;
- the role of municipalities;
- planning and ecosystems;
- relationships between the Planning Act and the Environmental Assessment Act; and
- information.

Purpose of the Planning Act

The basis for land-use planning in Ontario, the Planning Act, does not include a statement of purpose. However, it does signal its focus when it defines an official plan as a document "to provide guidance for physical development". In general, the Planning Act establishes processes for planning and development, but contains little guidance on their content, including environmental matters.

Although this does not preclude environmental planning, it certainly doesn't encourage it.

At the provincial level, Section 2 of the Planning Act directs the Minister of Municipal Affairs to have regard to matters of provincial interest, including the protection of the natural environment; the protection of features of significant natural, architectural, historical or archaeological interest; the supply, efficient use, and conservation of energy; and the health and safety of the population. The phrase "have regard to" means that these matters must be seriously considered, and an explanation provided if they are not taken into account.

Similarly, in respect of the municipal level, Section 1(h) of the Planning Act states that official plans are to "have regard to relevant social, economic and environmental matters", but gives no specific requirements for including environmental factors in preparing official plans and amendments, zoning by-laws, plans of subdivision, site plans, etc.

This gives municipalities considerable discretion, enabling them to place as much, or as little, emphasis as they wish on environmental matters. The result is a climate of uncertainty for developers and the public, as well as inadequate protection for the environment.

Provincial Role

Provincial Leadership

There is an urgent need for greater provincial direction regarding environmental considerations in the planning process. The urgency arises from several factors. First, as we pointed out in the introduction, there are tremendous pressures for growth and development in southern Ontario, particularly in the Greater Toronto region. This raises questions about future growth: where should it occur? Can rural landscapes, woodlands, wetlands, and valleys be protected? How can development be undertaken in an environmentally sustainable way?

Second, many municipal official plans are currently being reviewed or prepared. Two of the regions in the GTA — Peel and York — are still in the process of preparing their first official plans, while Halton and Durham are revising theirs and Metro Toronto is preparing its second official plan. At the same time, most of the 30 local municipalities are undertaking official plan reviews. In the five or more years since existing plans were initiated, public concerns about environmental quality have increased. On one hand, the current reviews are an opportunity to set the direction for improving and maintaining ecosystem health in the Greater Toronto region. On the other hand, the lack of provincial guidance regarding environmental priorities and an ecosystem approach to planning, creates a situation of uncertainty for municipalities, developers, and the public, and presents the possibility of further environmental deterioration.

Third, the absence of provincial leadership has led to an unbalanced situation in which municipalities take different approaches to environmental matters: some ignore them, while others do what they can, with varying degrees of success. These piecemeal and inconsistent approaches provide very patchy protection for ecosystems, and make it hard for developers to know the rules of the game.

Fourth, the number and scale of matters that transcend municipal boundaries — including watersheds, the Oak Ridges Moraine, waterfronts, foodlands, and transportation, among others — is growing. They require a level of co-ordination among municipalities that is hard to achieve without provincial leadership.

There are, in fact, several provincial initiatives under way to address environmental and planning issues. The Ministry of Municipal Affairs is undertaking work on the greening of the planning process and a green guide to planning practice, and is streamlining the planning process and identifying approaches to developing provincial policies and plans. The Ministry of Agriculture and Food is investigating innovative ways to protect agricultural lands. The Ministry of the Environment is undertaking an Environmental Assessment Program Improvement Project (EAPIP). Unfortunately, progress on all these initiatives is extremely slow and there is limited co-ordination among the different programs.

Moreover, apart from the findings of EAPIP, little information has been made publicly available and there has been limited public discussion to date.

It is interesting to note that the lack of integration of these different provincial initiatives was a recurring theme in many submissions to the Environmental Assessment Advisory Committee regarding EAPIP. For example, the organization representing Regional Chairmen of Ontario commented that fine-tuning the Environmental Assessment Act will result in improvements to environmental planning that can be measured in yards, when the problems demand solutions that can be measured in miles. The organization said that a much broader approach to environmental and economic systems planning in Ontario is needed, and that all of the planning legislation should be reviewed from an integrated standpoint.

Provincial Policy Statements

Although many of the provincial initiatives to address environmental and planning issues will require legislative changes, others can be accomplished within the framework of existing legislation. For example, Section 3 of the Planning Act permits the Province to issue policy statements to guide municipal planning on matters of provincial interest. However, so far, issuing policy statements has been a painfully slow, contentious process. The resultant policy vacuum leads to confusion and uncertainty: developers, environmentalists, and municipalities are all operating without a clear sense of the rules of the game.

There are both administrative and political reasons for the limited use of Section 3 of the Planning Act to date. Inter-ministerial and inter-departmental turf wars over control and priorities make it difficult for governments to reach agreement on the substance of policy statements. Lack of political will, and the attitude that it is sometimes safer and easier to simply do nothing, impede provincial leadership. In the meantime, however, land-use decisions continue to be made without a clear statement of provincial priorities regarding the environment.

The Review Process

The Province has opportunities, within the existing planning process, to comment on environmental matters during the preparation of official plans and when it reviews official plans, official plan amendments, and subdivision and condominium plans. In terms of ability to ensure environmental protection, these reviews are hampered by:

- limited and ill-defined agency mandates;
- duplication of effort;
- poor agency co-ordination;
- inadequate resources; and
- lack of enforceable and consistent standards.

Each provincial agency is responsible for commenting on specific matters within its mandate. For example, the Ministry of the Environment comments on water quality, air quality, noise, odours, soils and groundwater, landfill sites, and servicing; the Ministry of Natural Resources comments on aggregate resources, forestry, wetlands, fisheries, wildlife, and Areas of Natural and Scientific Interest (ANSIs); the conservation authorities comment on flooding, filling, and water quantity; and the Ministry of Agriculture and Food comments on foodlands.

In some cases, an individual ministry has conflicting responsibilities (e.g., MNR's roles with respect to mining and with protection of natural areas). In addition, the agencies undertake their reviews separately, which leads to fragmented and often-conflicting comments. One of the functions of the Ministry of Municipal Affairs is to resolve conflicts and co-ordinate reviews — a lengthy and difficult task.

Regardless of the effectiveness of individual or co-ordinated reviews, no one is responsible for ecosystems — for ensuring that relationships (for example, between groundwater depletion and fisheries) within the ecosystem are considered, or that the cumulative effects of many activities in an area are understood. This was illustrated during the Environmental Assessment Advisory

Committee's review of *The Adequacy of the Existing Environmental Planning and Approvals Process for the Ganaraska Watershed*, published in November 1989. The Committee was told that government reviewers do not consider cumulative effects when commenting on specific applications and proposed amendments. Clearly, it is all too easy for the implications for the ecosystem of plans or development proposals to fall between the cracks.

Government reviews are notoriously slow, adding to the delays and uncertainty experienced by proponents, the public, and municipalities alike. The primary reason for delay is overload: there are simply too many cases and not enough staff to undertake reviews in a timely fashion. To illustrate the point, during 1991, the Ministry of Municipal Affairs' Plans Administration Branches — which have a combined staff of 95 people — expect to be involved in reviewing and commenting on eight regional official plans, ten county plans, 98 lower-tier official plans, 1,150 official plan amendments, 415 plans of subdivision/condominium, 90 zoning orders or amendments, 1,355 consents, and 475 road adjustments! A similar workload is borne by the many review agencies involved. It is obvious that it will be extremely difficult to do justice to all the issues, including the environmental ones, raised in these planning matters.

Agency reviews are supported by few legally enforceable standards for environmental protection. Instead, the government has prepared guidelines or objectives for such matters as water quality, soil contamination, and storm water management. These guidelines are rarely comprehensive enough to cover all the situations that may arise. For example, the Guidelines for the Decommissioning and Clean-up of Sites in Ontario are intended to guide clean-up of soils and groundwater contaminated by industrial activities, waste disposal, spills, etc. Of the hundreds of organic and inorganic chemicals that could be found in soils and groundwater, the guidelines provide acceptable levels for only 18. The onus is, therefore, on proponents to develop suitable clean-up levels for their own sites — a time-consuming and uncertain process for all concerned.

Municipal Role

Municipal Plans

Virtually all municipalities in southern Ontario are covered by official plans, most adopted during the 1960s and '70s. However, these plans have not provided a long-term framework for community change. In fact, some observers conclude that growth distribution and form in Ontario are more influenced by individual development proposals, requiring concomitant official plan amendments and zoning changes, than by local and regional official plans. This is confirmed by the Ministry of Municipal Affairs' expectation that it will be asked to review about 1,150 official plan amendments this year.

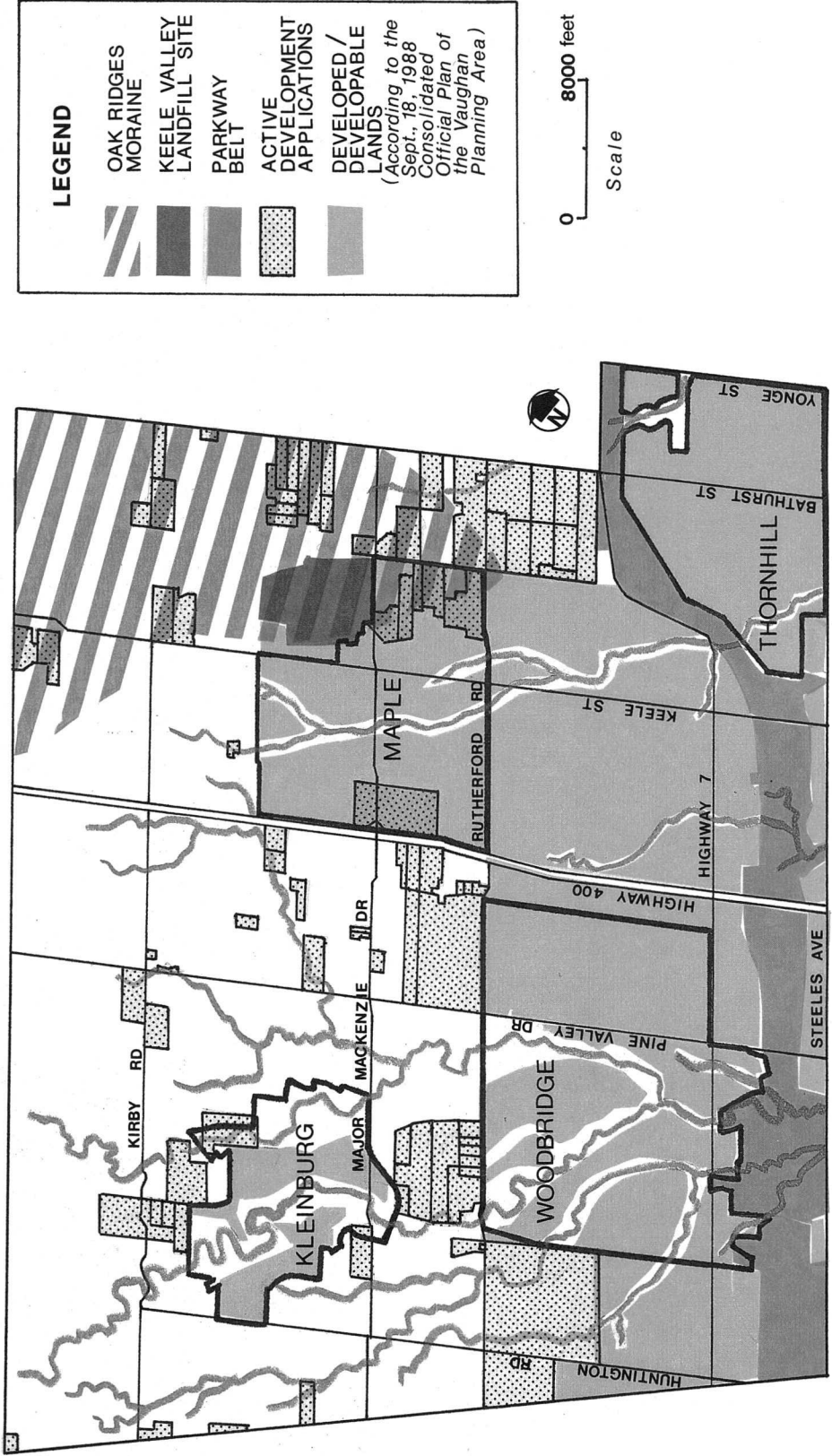
Clearly, irrespective of official plan designations for agriculture or open space, in some municipalities there is a widespread assumption that in order for development to proceed only an amendment to change the permitted land use is needed.

In some places, the absence of an up-to-date official plan to guide development has been attributed to the Province's insistence that development be approved only if proven servicing capacity (water and sewer) is available. Thus, in York and Durham regions, official plan amendments have been made on an incremental basis as excess capacity in various parts of the trunk sewer system has been identified.

This way of operating tends to discourage local municipalities in the regions from undertaking long-term planning. The apparent disregard for existing land-use plans is quite prevalent and may be illustrated by a comparison of official plan designations with the distribution of development applications. Map 2 shows a typical situation, in this case in the City of Vaughan. It should be noted that in 1989, concern about the implications of incremental development in Vaughan prompted a municipal policy review to examine future options and produce a policy framework for land use and development.

The Planning Act facilitates amendment of official plans. Although this is intended to provide flexibility to meet changing

ACTIVE DEVELOPMENT APPLICATIONS IN THE CITY OF VAUGHAN



MAP 2

needs, it has the unfortunate result of producing numerous incremental decisions, and making it impossible to consider the cumulative effects of the many separate developments that result. It is also inconsistent with, and tends to undermine, the concept of the official plan as a statement of broad, long-term land-use policy intended to guide day-to-day decision-making.

One of the most serious deficiencies of many municipal official plans, particularly in rural areas outside the Greater Toronto region, is their failure to control severances effectively. A severance (or "consent") is the creation of a new parcel of land (usually for building) without the registration of a plan of subdivision, and, thus, without the opportunity for scrutiny to which plans of subdivision are subjected. Therefore, there is rarely any consideration of potential effects on agricultural land, woodlands, groundwater, wildlife habitat, etc., and it is impossible to take into account the possible cumulative effects of many small decisions. In many cases, decisions about severances are made on the basis of lot sizes required to support septic tanks, with limited attention paid to such important ecosystem variables as soil types, water tables, and groundwater flow.

A recent review of environmental planning and approvals in Grey County by the Environmental Assessment Advisory Committee found that the vast majority of residential growth in the county has been accommodated through severances, posing long-term risks to the natural environment, as well as having possible social and economic effects.

The magnitude of the severance problem in the province as a whole is also significant: although no firm figures are available, it appears that as many parcels are created annually in Ontario by consents as by plans of subdivision.

Because the Planning Act focuses on the process of planning, the content of official plans can vary widely. Few have strong environmental policies, and those that do are not comprehensive or effective enough. For example, official plans may identify environmentally significant areas without providing adequate means to protect them and there is rarely enough information about the environment to enable sound decisions to be made. In many cases,

planners have not been trained to take an ecosystem approach, and local councils have not traditionally placed a high priority on environmental matters. In fact, it is frequently perceived that the public is more aware of environmental values and sensitivities than are their elected representatives and their staffs.

A recent example is the fight to save the Altona Forest, as well as other significant woodland and wetland areas in the Petticoat Creek watershed. Current proposals would allow development (housing, two schools, a church, and a park) to proceed in portions of the Altona Forest. Many environmental and residents' associations are protesting the losses of wildlife habitats and greenspace that they expect would occur. The Town of Pickering has asked the Minister of the Environment to comment on environmental issues in the context of the *Greenlands Strategy* and the *Watershed* report, whether an environmental assessment should be undertaken, and whether there are means available to protect the Forest.

The need for clear statements of provincial interests in land use has already been discussed. But such statements do not say how *locally* significant wetlands, fisheries, woodlots, rare species, etc., are taken into account. In the absence of official plan statements and policies for natural features, municipalities frequently rely on provincial classifications to determine priority values. For example, the draft wetlands policy statement classifies wetlands (classes I - VII) according to their degree of provincial significance. The draft policy proposes official plan designations and zoning to protect class I and II wetlands, but leaves decisions on the remaining wetlands to the discretion of local municipalities.

If a largely urban municipality has only one wetland left, but it happens to rate Class VII on the provincial scale, the tendency would be to underestimate its significance, despite its local importance. This suggests a need to ensure that areas and features of local/regional significance are given as much consideration in the municipal planning process as are the major areas of provincial significance.

Official plan designations, zoning categories, and other Planning Act controls have generally been developed to guide the distribution and form of urban development, with only general

consideration of the environment. For example, the two categories most commonly applied to natural areas are "hazard lands" and "open space"; both provide limited protection.

The concept of hazard lands, such as steep slopes, unstable soils, and floodplains, is based on the need to protect human life and property. In other words, they represent negative constraints on development while providing protection of significant natural areas as only a fortunate coincidence at best. At worst, engineering solutions, such as stream channelization, may be used to overcome the hazard and permit development. Open space zoning usually permits uses, such as golf courses, public works facilities, sports grounds, etc., that are not compatible with protection of natural areas. This suggests that new zoning categories are required to explicitly protect natural areas and ecological functions, rather than leaving them to be covered by such designations as hazard lands or open space.

Another relationship between zoning and environmental protection relates to standards for such things as lot sizes, road widths, and sidewalks. These standards, among other influences, can affect the density of urban growth (compact versus sprawl), the amount of land used to build a given number of homes, the feasibility of public transit, and the number of paved surfaces. The Provincial Policy Statement on Housing requires municipalities, by August 1991, to develop official plan policies and compatible zoning standards to ensure that a variety of housing types are provided, including affordable housing. In the meantime, however, many municipalities appear reluctant to respond to developers' requests for zoning to permit smaller lot sizes. Apparently there is a concern that this would lead to "downgrading" of their communities and a decline in nearby property values.

Lack of municipal determination to protect environmental features and processes can result in lengthy and contentious approvals processes. The case of the Creditview wetland in Mississauga is instructive in this regard. In 1988, the Mississauga City Council recommended and the Region of Peel granted conditional approval for the East Credit and Sherwood Mills subdivision plans, which include the wetland. Environmental studies were subsequently conducted, confirming local naturalists' beliefs that the wetland is

a high-quality natural area that should be protected. However, the developers pointed out that, on the basis of draft plan approval, lots had already been presold, and that they would be entitled to compensation (estimated at close to \$57 million) for lost building lots as the result of any redesign to protect the wetland. Following a request for designation under the Environmental Assessment Act, this case was reviewed by the Environmental Assessment Advisory Committee, which recommended a process of negotiation among the affected parties (see Box 1 later in this chapter).

Municipal Powers

On their own initiative, a number of municipalities are attempting, with some success, to use the Planning Act for environmental protection purposes, despite the limited powers it provides. However, the Planning Act is basically only permissive, or enabling, legislation, and planning is a tool to be used only to attain whatever ends are sought by political decision-makers. If the politicians are not concerned about environmental protection, they will not use planning for that purpose unless the provisions of the Act are employed to compel them to do so.

Conversely, municipalities that do want to take a strong position may find they lack the statutory muscle to do so. For example, some municipalities have official plan policies intended to protect woodlots, ravines, and marshes; provide buffers for greenlands; ensure public access to waterfronts and other greenlands; and maintain views; and they work with developers to negotiate environmental protection measures during the development approval process. Nevertheless, there is concern that, if challenged at an Ontario Municipal Board hearing, the municipality might be found to have little legislative support for its actions.

The City of Toronto Council has adopted policies that require developers to provide strategies to address the impact of noise on people; waste reduction and recycling; auto use minimization; water conservation; and energy efficiency and conservation. Council can apply conditions under the appropriate sections of the Planning Act in the case of new developments involving official plan amendments, rezoning or condominium/subdivision applica-

tions. However, site plan control under Section 40 of the Act makes no provision for such requirements, and, in such cases, the City has to rely on collateral agreements, which have no legislative force.

In theory, building permit applications could also provide municipalities with an opportunity to ensure that environmental conditions, such as soil contamination, are addressed. But the Building Code Act is silent on such matters, leaving them to the vagaries of negotiation between individual municipalities and developers.

Municipalities also have little power to control activities such as grading, removal of topsoil, filling, drainage, and removal of trees and other vegetation that may be undertaken by landowners during landscaping or renovations, or by developers preparing sites for building. Often, these activities result in irreversible damage to soils, groundwater, watercourses, and/or wildlife habitats. Although the Trees Act enables municipalities to pass by-laws restricting the destruction of trees, many municipalities have not done this, and by-laws that have been passed are difficult to enforce.

Planning and Ecosystems

Because municipalities were created without reference to ecological systems, many ecosystem features and processes — rivers, groundwater, forests, wildlife populations and migration, air movement — transcend municipal boundaries. The Planning Act does not provide for planning in areas larger than regions and counties, so there is no legislative framework for land-use planning for areas defined on an ecosystem basis — watersheds, the Oak Ridges Moraine, or the Greater Toronto Bioregion. (The Niagara Escarpment Plan is an exception, and is based on special legislation — the Niagara Escarpment Planning and Development Act).

So far, efforts to develop watershed management strategies for such rivers as the Don, Humber, and Rouge have had little effect because of lack of co-ordination and commitment by all jurisdictions in each watershed. For example, the City of Toronto's Task Force to Bring Back the Don is concerned that its own work on

rehabilitation of the Lower Don will have limited value without complementary action throughout the watershed to restore the entire river.

In its review of the adequacy of the existing environmental planning and approvals process for the Ganaraska Watershed, the EAAC found that the interjurisdictional character of the Watershed and the Oak Ridges Moraine poses a considerable challenge for environmentally sensitive land-use planning, particularly with respect to cumulative effects. Each municipality has its own set of priorities and objectives based on local concerns. Without special efforts, there is little likelihood that separate municipal decisions will reflect an understanding of what is needed to protect overall environmental quality.

In response to concerns about the fate of the Oak Ridges Moraine, the Province has expressed a provincial interest, and has developed draft guidelines for the area, although these have not yet been released. Questions remain about how such guidelines will be implemented and about the need for co-ordinated planning across municipal boundaries to ensure that the Moraine receives effective and consistent protection.

The Conservation Authorities Act gives authorities the responsibility to "study and investigate the watershed and to determine a program whereby the natural resources of the watershed may be conserved, restored, developed and managed". Many conservation authorities have developed watershed plans, and the Act empowers them to enter into agreements with other government bodies. However, conservation authorities do not have the mandate to require that local and regional official plans conform to their watershed plans, and it is generally difficult to resolve conflicts and ensure that each jurisdiction does its part.

For example, the Ganaraska Region Conservation Authority had a watershed plan in 1983 but, because of lack of funding and provincial support, it was not developed past the draft stage. The role of the Authority has been limited to identifying the potential impact of development on its own lands and environmentally sensitive areas, and administering fill restrictions and flood prevention requirements.

Three conservation authorities, those of Central Lake Ontario, Ganaraska Region, and Lower Trent Region, recently developed jointly the Lake Ontario Shoreline Management Plan. There was limited involvement of the municipalities concerned and there is no certainty the municipalities will, in fact, incorporate recommendations from the Shoreline Management Plan into their own official plans.

The priorities and resources of conservation authorities vary widely: in some watersheds, they have focused more on such activities as flood control through dams and channels, lakefilling, and timber extraction, while paying less attention to ecosystem health and stewardship. On the other hand, authorities that may wish to undertake watershed planning and conservation are typically limited by inadequate funding.

The Metropolitan Toronto Remedial Action Plan (RAP) is intended to restore water quality along the Toronto waterfront. This presents a major challenge: to develop new and integrated approaches to land-use planning, development control, and environmental management of both land and water throughout the Metro watersheds that feed into Lake Ontario. The Environmental Assessment Act will apply to many of the projects proposed to fulfil parts of the RAP. Will it be possible to incorporate some of the requirements of environmental assessment (for example, to establish the need for projects and to determine the most appropriate ones) during preparation of the RAP so that project-level assessment can focus on alternative ways of carrying out each individual project?

The Greater Toronto region combines one of the fastest growing urban areas in the country with some of Canada's best agricultural land: almost 40 per cent of the Class I farmland in Ontario is visible from the CN Tower! It is not surprising that this land is under pressure from urban activities.

Although it is often assumed that urbanization is responsible for encroachments on the agricultural land base, a more significant factor is the "urban shadow" effect, which extends well beyond the near-urban fringe. This involves the combined effects of a number of influences, including:

- increases in land values and in taxes;
- land-use conflicts;
- absentee ownership of large tracts of farmland by developers and speculators;
- increases in urban-related land uses such as highways, dumps, transmission lines, race tracks, and golf courses; and
- social change, and other factors arising from proximity to the city.

Among other consequences, these factors discourage long-term management and capital investments, and undermine economically viable agricultural use. To date, largely for reasons discussed earlier (see "Municipal Role"), municipal planning processes have been incapable of addressing this issue. Although the Province published a *draft* Policy Statement on Foodland Preservation in 1986, it remains to be seen how effective the policy will be when it comes into full effect.

Until recently, nature conservation in Ontario has emphasized saving "islands of green" — the remnants of forest, wetland, and prairie spared from agriculture, resource uses or urban development. This is reflected in the approaches of identifying and trying to protect environmentally significant areas (ESAs), areas of natural and scientific interest (ANSIs), greenlands, and nature reserves. The planning process, through the mechanisms of official plan designations and zoning, tends to encourage the "islands" approach, in which land is viewed as being in separate pieces with different functions.

Although that may be necessary, it ignores ecological processes and the need for holistic thinking about ecosystems. As a result, the land-use planning process does little to encourage sound environmental management in *all* activities: urban development, industrial operations, landscape management, agriculture, resource extraction, and water treatment and use.

Relationships between Environmental Assessment and Planning Processes

As explained in Chapter 1, although the processes of land-use planning and environmental assessment are, in theory, complementary, they have not evolved to work together effectively. In practice, the opposite is true: there are many situations in which the relationship between land-use planning and environmental assessment is confused, creates difficulties for all parties involved, and places environmental protection in jeopardy.

Admittedly, the Consolidated Hearings Act recognizes that some undertakings may be subject to different statutes, including the Environmental Assessment Act and the Planning Act, and provides for a joint hearing. Although this is beneficial in providing a co-ordinated process at the hearing stage, it does not ensure the co-ordinated study, planning, evaluation, and public consultation that must precede a hearing. This can exacerbate conflicts, add to the time and costs incurred by the proponents, increase the amount of time and work demanded of the public, and reduce the effectiveness of the planning process (for example, by requiring proponents to undertake studies separately instead of integrating them).

Municipal Infrastructure

The Environmental Assessment Act and Planning Act processes most frequently overlap when municipal government activities are being considered — primarily the provision or upgrading of infrastructure, such as roads, bridges, and facilities for water supply and water treatment.

Building municipal infrastructure is subject to the Environmental Assessment Act, through municipal class environmental assessment processes for roads, water supply, and sewage treatment. In many cases, complications arise because class environmental assessment processes for the provision of infrastructure have not been co-ordinated with planning and approval processes for municipal development. The timing of the processes may cause difficulties. For example, if official plan amendments have already been granted to permit development, it may be irrelevant to try to

assess alternatives to providing certain infrastructure, even though this is a requirement under the EAA.

Developers waiting while the class environmental assessment process is undertaken face uncertainty and delays. The processes for public involvement also become complicated, with two streams of activity, each with its own reports, meetings, and organization.

The Silver Creek Valley in the Town of Halton Hills provides a good example. Development proposals include several subdivisions and some draft approvals have already been granted, including a condition that developers contribute \$4.6 million to the \$14.5-million expansion of the Georgetown Wastewater Treatment Plant. The plant has now been expanded, but final development approvals will not be given until several environmental assessments of necessary infrastructure projects have been completed.

The Region of Halton is currently undertaking separate assessments, under the Municipal Class environmental assessment process, of a number of projects that will affect the Silver Creek Watershed. They are: twinning a sanitary trunk sewer; a test well for water supply that will affect a significant wetland in the valley; and construction of a landfill bridge across the valley. In addition, the Town of Halton Hills is proposing a road widening involving relocation of part of the creek and relocation of a weir.

The Ministry of Natural Resources and the Credit Valley Conservation Authority have recommended a comprehensive watershed management plan for the area. The Minister of the Environment is considering a request to apply a full environmental assessment to all proposals, including the municipal infrastructure and the proposed private developments, in the Silver Creek Valley. This situation raises many questions, particularly about the validity of assessing the environmental effects of proposed infrastructure after development decisions have been made; the lack of comprehensive, ecosystem-based planning; the need to ensure that cumulative effects are considered; and the lack of co-ordination among various environmental assessment and planning processes affecting a single area.

Another example of overlap between planning and environ-

mental assessment processes can be found in public transit initiatives in Metro Toronto. In 1990, the provincial government announced a rapid transit agenda for the '90s called "Let's Move". It included projects within Metro Toronto and Mississauga, as well as improvements to GO Transit services.

In response, Metro Toronto and the Toronto Transit Commission (TTC) launched a program under which they would undertake six of the projects extending subway and light rapid transit lines within Metro Toronto. Each of these projects is subject to the Environmental Assessment Act. The Environmental Assessment Branch of the Ministry of the Environment asked the proponents to submit a "plan environmental assessment" of the entire program because it was concerned that a project-by-project review would be inadequate.

However, Metro Toronto and the TTC have already undertaken a number of planning studies, including a major strategy outlined in a report called *Network 2011*, published in 1986, and others for specific elements of the study (e.g., the Sheppard/Finch Rapid Transit Corridor Study). Therefore, they are now working on an overview document to accompany the individual environmental assessment reports. Some observers believe it is ironic that rapid transit initiatives, valuable alternatives to automobile use, are being delayed by lengthy and expensive environmental assessment procedures.

The examples of Silver Creek Valley and Let's Move raise a number of questions:

- Should the environmental assessment process be used to evaluate alternatives and assess individual projects in the absence of a comprehensive, ecosystem-based plan for land use and infrastructure?
- Can municipal planning and environmental assessment efforts be co-ordinated so that the former fulfil some of the requirements of the latter?
- How can duplication of effort by staff and consultants be reduced?
- How can the public involvement processes be consolidated?

Public-Sector Development

In exceptional cases, the overlap between municipal planning and environmental assessment processes has necessitated special action. For example, when the City of Toronto proposed Ataratiri, a major housing and mixed-use development, it was not clear whether it was subject to the Environmental Assessment Act because the project includes social housing and private development, both of which are exempt. In order to avoid further confusion, the City applied for, and received, an exemption from the EA Act. The exemption has a number of conditions, including a requirement for a comprehensive environmental study, a detailed review and approval process, and a public participation program, to ensure that environmental concerns are adequately addressed in the planning process to the satisfaction of the Ministry of the Environment.

In a similar vein, discussions are under way about how to integrate the requirements for planning and environmental assessment of the proposed Seaton community. Several options have been suggested. One is to follow a similar strategy to that adopted for Ataratiri. Another is a full environmental assessment focusing on alternative forms of urban development, but without the necessity of considering alternatives to the development.

Private-Sector Development

These examples of overlap between planning and environmental assessment processes for public-sector projects suggest issues that may arise when private-sector development is brought under the Environmental Assessment Act. The Minister of the Environment, in her introduction to the EAPIP report, *Towards Improving the Environmental Assessment Program in Ontario*, clearly recognizes these issues and intends to establish a task force to examine how the Act should be applied to the private sector. Some of the key questions concerning relationships with land-use planning include:

- Can planning and environmental assessment requirements for a specific project be integrated to provide genuine protection for the environment and an efficient, open, and consistent process?

- When is the most appropriate time to consider alternatives to a private-sector undertaking — during assessment of a private-sector proposal? when a comprehensive, ecosystem-based plan, including decisions about suitable activities in different areas, is being prepared?
- How can public involvement be effectively co-ordinated to avoid confusion and duplication?
- How can requirements for information, analysis, and documentation be integrated?

Requests to Designate Planning Matters under the Environmental Assessment Act

There have recently been increasing numbers of requests to designate private-sector development proposals, such as official plan amendments, zoning changes or subdivision approvals, under the Environmental Assessment Act. There are many possible reasons for the increase, including:

- public concern that the municipal planning process is not addressing environmental concerns adequately;
- mistrust of the abilities and motives of city politicians and/or staff;
- mistrust of the provincial government review process;
- a desire to obtain intervenor funding (available for Environmental Assessment Board hearings, but not for Ontario Municipal Board hearings);
- a desire to shift the burden of proof from the complainant to the proponent;
- a need to ensure consideration of alternatives to a proposal and alternative ways of carrying it out (neither of these is required by the Planning Act);
- inadequate environmental information and analysis.

In the majority of cases, both the Minister of the Environment and the Environmental Assessment Advisory Committee have

Recent Cases Reviewed by the Environmental Assessment Advisory Committee

Creditview Wetland, Mississauga

The South Peel Naturalists' Club requested that the Minister of the Environment designate proposed developments in the wetland under the EA Act because of concerns that the City of Mississauga and the Region of Peel were not responding to public concerns about the future of the wetland. The EAAC concluded that "the municipal planning process and public sector acquisition program appear to be inadequate to meet the present challenge of wetland preservation". However, it found that in the case of the Creditview Wetland, designation under the EA Act would not be a useful approach and recommended instead a process of negotiation between the relevant parties.

Condominium Development by Runnymede Development Corp. in the City of Scarborough

The requests for designation under the EA Act were based on concerns that the proposed development would be on the site of a former landfill, and that the scale of the development, which was approved over 20 years ago, is inappropriate today. The EAAC recommended that the Ministry of the Environment and the City of Scarborough undertake specific steps to ensure that the environmental, public health, and safety concerns are publicly reviewed and adequately addressed under the Environmental Protection Act and the Planning Act.

Redevelopment of the Motel Strip Lands in the City of Etobicoke

The designation request was made because of public concerns about the effects of lakefilling and high densities envisaged in the proposed official plan amendment (OPA C-65-86) for the area. The EAAC found that it was not appropriate to address concerns about the inadequacies of the planning process for the privately held lands on the motel strip by subjecting them to the EA Act. However, it did recommend that the Ministry of Municipal Affairs review the planning process under the Planning Act to ensure that environmental concerns, including cumulative effects, are addressed comprehensively. With respect to the shoreline and nearshore redevelopment, the EAAC recommended a single environmental assessment under the EA Act. Instead, the Province declared Provincial Interest in the motel strip and undertook an Environmental Management Master Plan process for the Public Amenity Scheme under the Planning Act.

Sydenham Mills Subdivision, Grey County

The subdivision request was opposed locally because of predicted effects on fish and wildlife habitats and woodlands, and the failure of the Township of Sydenham and Grey County to take environmental values into account. The EAAC recommended against designation under the EA Act because the application was to be subject to an Ontario Municipal Board review, and urged government agencies to include consideration of cumulative effects in their review for the OMB hearing. The OMB rejected the plan of subdivision because of its environmental effects and because the County had not properly applied the environmental provisions of its own official plan.

Environmental Planning and Approvals in Grey County

As a result of the Sydenham Mills Subdivision proposal, the Minister of the Environment asked the EAAC to review the adequacy of environmental considerations in the planning and approvals process in Grey County generally. The EAAC concluded that rural lots are being created through severances in the absence of a long-range plan, without adequate consideration of environmental effects, and against the advice of provincial and local agencies. In response, the ministers of the Environment and of Municipal Affairs announced a joint decision to require Grey County, in co-operation with the Province, to undertake a comprehensive and forward-looking planning program. The EAAC also concluded that the concerns raised about Grey County are linked to a number of significant underlying issues that can be resolved only through a new provincial framework for land-use planning. It recommended that the Province should immediately begin a comprehensive public review of the land use planning and approvals process, as well as the larger context of policies and programs that affect the ability of planning efforts to ensure environmental sustainability and facilitate appropriate development.

Richmond Hill OPA 71—Secondary Plan for the Lake Wilcox/Oak Ridges Area

The Lake Wilcox Residents' Association requested that OPA 71 be designated under the EA Act. Concerns include the impacts of the proposed development on the Oak Ridges Moraine, development in a floodplain, the loss of agricultural lands, the lack of water services, and the design of master drainage plans. The EAAC has submitted its report to the Minister of the Environment.

found that designation under the Environmental Assessment Act is not necessarily better, as long as provisions in other legislation — particularly the Planning Act and the Environmental Protection Act — are fully used. Box 1 summarizes some recent examples of cases reviewed by the EAAC; they illustrate the reasons for the designation requests and the EAAC's conclusions.

Information

The paucity of good information on which to base decisions is a perennial problem. Because the wrong questions are often asked, the information given is often inadequate for understanding ecosystems or predicting cumulative effects. In addition, where environmental information is available, it is frequently scattered in many locations, and is difficult to synthesize because of inconsistencies in approach, purpose, and methods.

Municipalities generally lack the expertise and information to adequately identify the environmental values and limitations in their jurisdiction, or to evaluate the direct and cumulative effects of proposed activities.

Ecological information is generally presented piecemeal, with little of the integration needed to explain ecological processes, understand the significance of natural features or assess ecosystem health. This makes it difficult to use the information constructively to develop criteria for future activities.

Conclusions

The current inadequacy of land-use planning processes to protect and improve ecosystem health results from many inter-related factors. They include: limited or ineffective use of the provisions of the Planning Act; the Act's own limitations; lack of provincial leadership; and lack of clarity in the relationships between the Planning Act and the Environmental Assessment Act.

Widespread acceptance of the concept of environmental sustainability is relatively new, and affects the way we look at many areas of public policy and decision-making, including land-use planning. Viewed in this way, it is not surprising that past planning

processes have not taken into account the long-term consequences of development on ecosystem health.

In addition, as our awareness of ecosystem processes and connections grows, it becomes increasingly apparent that our planning processes are constrained by municipal boundaries that cannot effectively take ecosystems into account. Yet there are few mechanisms to co-ordinate the efforts of local and regional municipalities to provide ecosystem-based planning.

The consequences are severe, and are manifested in two ways. One is the continuing degradation of ecosystems, effects on quality of life, and dwindling natural resources in the Greater Toronto Bioregion. The other is the complicated, slow, and unsatisfactory planning and development approval processes that frustrate all concerned — the public, developers, municipal governments, and provincial agencies alike.

Furthermore, as efforts to improve understanding of ecosystems and assessment of the environmental effects of activities become more widespread, many of those involved feel that they are aiming at a moving target: the rules of the game keep changing. Thus, although the development industry is prepared to undertake studies and work with municipalities and public groups to address environmental concerns, it is frustrated by the absence of clear and firm requirements.

Viewed from a national perspective, however, the inadequacies of Ontario's land-use planning "system" with respect to environmental protection are probably no worse — and in many respects may be less serious — than those of other jurisdictions. In addition, it is important to recognize that there are some significant opportunities for the future: the Greater Toronto region is blessed with many magnificent natural features, including the Niagara Escarpment, the Oak Ridges Moraine, and the waterfront, as well as the many rivers, creeks, and forests that connect them. The opportunities lie in appreciating the value of these places, and taking steps now to ensure that they will be protected and enhanced for the future. The following chapters suggest some ways to work towards this goal.

CHAPTER THREE

WATERSHED HORIZON: PROTECTING THE ENVIRONMENT THROUGH LAND-USE PLANNING

Important Principles

The previous chapter demonstrates a significant consensus, in both the public and private sectors, for a system that ensures fair and consistent integration of environmental protection into land-use planning. This is compatible with the widespread acceptance of the principles proposed in the *Watershed* report — to work towards making the waterfront and watersheds “clean, green, useable, diverse, open, accessible, connected, affordable, and attractive” — suggesting that now is the time to give greater consideration to environmental matters in managing the Greater Toronto region.

This chapter presents some general principles that could be used to guide efforts to integrate protection of the environment into land-use planning fairly and consistently. They are based on our conclusions that, in view of the inevitable increase in demand for development and redevelopment in the Greater Toronto region, effective steps must be taken in order to ensure that:

- the planning and approval process requires proper and accurate prediction and assessment of significant effects on the environment at the earliest possible stage in the process;
- change is distributed and managed to improve environmental health and to minimize negative consequences; and
- development that cannot be sustained by the environment either will not be allowed or at least will be considered in terms of proposed "trade-offs" which are publicly acknowledged and debated.

It is essential that the land-use planning process acknowledge the interrelatedness of economic and environmental values. Satisfactory quality of life and economic development cannot subsist on a deteriorating environmental resource base. At the same time, the environment cannot be protected when growth fails to account for the costs of environmental destruction.

The land-use planning process must change to accommodate these considerations. Environmental objectives must be approached systematically, in a co-ordinated and comprehensive manner that makes it possible to manage change based on environ-

mental principles, as well as on other principles of good planning. As recommended in *Watershed*, this can be done by making the ecosystem approach a fundamental basis for planning.

An ecosystem is an interacting system of air, land, water, and living organisms, including humans, in which each plant, animal or person is an integral part of the whole. This differs from the more traditional view of the environment, which consists of all the conditions and influences surrounding an organism.

A key to understanding ecosystems is to recognize that “everything is connected to everything else”. This is one of the reasons why cumulative effects occur as a consequence of many activities in an ecosystem. Understanding these relationships leads one to realize that human activities should be viewed, not as isolated events in space and time, but as interactions with pre-existing conditions that contribute to changes in ecosystem health, now and in the future. Another feature of the ecosystem approach is, therefore, a recognition of the importance of considering the needs of both present and future generations of human society.

The ecosystem approach helps people recognize that human communities and their economic systems depend on a healthy environment: clean air, land, and water; renewable and non-renewable resources, natural areas, and wildlife, etc. In turn, the health of the biophysical environment is affected by the choices humans make about their activities.

In Ontario, the land-use planning process focuses on socio-economic matters in decision-making, while the biophysical environment takes a back seat. The crucial need now is to redress the balance, so that the biophysical environment is recognized to be fundamentally important. We include in the term “biophysical environment” (abbreviated hereafter to “environment” for the sake of simplicity) such physical features as:

- woodlands, meadows, wetlands, and other natural areas;
- ravines and river valleys;
- air, soils, and waters;
- groundwater and recharge areas;

- rivers, ponds, and lakes;
- agricultural lands;
- geological features such as bluffs, cliffs, and beaches;
- heritage landscapes;
- parks and other open spaces.

The environment shall also be taken to include such human-made features as archaeological sites, built heritage, and other important community elements. In addition, and most important in the context of ecosystem planning, the environment must be considered as including the relationship among the physical elements; the nature and quality of land, air, and water; the various processes affecting environmental relationships and phenomena, such as hydrogeological and other natural cycles; soil ecology; wildlife; and human activities as they affect or are affected by the other components of the environment.

The remaining sections of this chapter provide some general principles for integrating consideration of the environment into land-use planning, within the overall framework of an ecosystem approach.

Environmental Considerations In Land-Use Planning

To ensure that land-use planning can achieve the objectives of the ecosystem approach, the process should be amended to include environmental considerations at all levels of decision-making: policy, plan, program, and project. This can be accomplished using as a guide a number of principles, including the following:

- Environmental values should be given a higher level of priority than in the past.
- Rather than trying to fix problems after damage is done, active efforts should be made to improve environmental quality and anticipate and prevent environmental damage.
- There should be systematic investigation, analysis, and inte-

gration of information about the existing physical, natural, and heritage environments. In addition to special features and resources, this should include the relationships among them: systems, connections, and processes.

- A thorough understanding of the environment, including the values, opportunities, limits, and constraints that it provides, should precede and guide land-use decisions.
- Different scenarios for change that are part of developing official plans should be evaluated, using ecosystem-based criteria. The nine *Watershed* principles may be useful in developing such criteria. Evaluation should also include an assessment of the possible cumulative effects of different courses of action, and consideration of targets and goals for monitoring and ensuring compliance with policies and plans.
- Proposed development should receive some form of environmental evaluation, recognizing that every decision to develop or redevelop land involves a decision about the environment. The environmental evaluation should be designed to reflect the nature and scale of the proposed activity.
- The intrinsic values of the environment should be recognized: for example, that land is valuable in its natural state and not simply raw material for ultimate urbanization.
- Development should accommodate and respect its environmental context. In some places, this may lead to an absolute prohibition on development. In others, it will lead to careful consideration of how development is carried out.
- Natural areas such as woodlands and wetlands should not be treated as “islands of green” but as integral parts of the whole landscape. Efforts should be made to establish links and corridors, and to promote remediation or replacement where damage has occurred. Measures should also be included to enhance environmental features.
- To the extent possible, planning efforts should encompass ecosystem-based units such as watersheds.

The Role of Plans

The phrase “land-use planning” implies creation of plans for implementing policies and providing guidance for development. The concept of a “plan” involves accumulating information related to present conditions and, as much as they can be foreseen, future conditions. It means basing judgements on policies, and prescribing requirements, standards or criteria that enable those governed by the plan or responsible for implementing the policies to understand what they are allowed or required to do or prohibited from doing. The existence of the plan allows them to design projects in confidence that compliance with the plan will be rewarded.

Essential measures for protecting the environment, like other planning objectives, may best be accomplished by actively planning on both a specific and comprehensive basis. The alternative is piecemeal planning and ad hoc, reactive treatment of site-specific approval applications in which remediation, mitigation, and trade-offs are considered an acceptable compromise to environmental degradation. Through effective, long-range planning, policies may be developed at each level of government for the purpose of protecting the ecosystem in perpetuity.

It should be an objective of the land-use planning system to develop a body of coherent, consistent, interrelated policies that will include co-ordinating plans and policies of various jurisdictions, and infrastructure and servicing facilities.

Using an ecosystem approach to planning makes it possible to achieve a better understanding of systems, including economic, social, and environmental factors, and the relationships among them. This, in turn, allows for trade-offs that are made on the basis of comprehensive, balanced information. The result is a better decision-making process.

The planning process should be set up so that people know, in advance, whether development can occur on any particular property, and, in most cases, the maximum amount of development and the type of development considered appropriate for that site. It should then be easier to determine, within the approval process, how the site might be developed, and in appropriate cases, to

impose binding conditions requiring protection of designated environmental features.

While effective plans will clarify principles and resolve potential conflicts, there will always be the need for thoughtful and informed decision-making at the specific approval level, and for public input into that process.

Assessment of individual applications should proceed on the basis of established standards, applied in an objective and rational manner. It is proposed that these standards include criteria designed to protect and enhance ecological health.

While plans should be comprehensively reviewed at regular intervals, and will require periodic revision and amendment, those affected by them should be able to rely on the stability, consistency, and integrity of the plans, and should not be confronted with frequent or arbitrary changes. There is every reason to believe that, in the context of a fair and predictable planning system, good developers will be able to compete effectively and will thrive.

Integration and Integrity

In addition to including comprehensive ecosystem protection, the planning process should also be integrated and consistent in its approach.

As much as possible, planning principles and policies should apply to all areas of public policy and decision-making. At the assessment and approval level, similar principles should apply to both private and public development, taking into account different procedural, jurisdictional, and accountability factors affecting the public sector.

This does not necessarily involve an attempt to merge the Planning Act and the Environmental Assessment Act nor a blanket application of environmental assessment to every private-sector proposal. It does involve an attempt to rationalize and improve on the system so that no substantial development will be approved without analysis of its environmental sustainability.

Principles and procedures should, to the extent possible, be

applicable throughout the province, to protect the interests of the people of Ontario. However, flexibility must be built into the system so that the application of principles can vary according to circumstances and local conditions.

Participation in the planning process by various levels of government should proceed on the basis that, as much as possible, there be co-ordination both within the government level and with other levels of authority. The frequently complained-of layers of disconnected rules and authority, at the provincial level in particular, should be addressed by bringing in policies, procedures, and response time standards to reduce fragmentation within and among agencies. These agencies must have sufficient resources to cope with workloads and ensure the timely processing of applications. As much as possible, the exercise of planning authority by a government or agency should relate to the jurisdictional and financial responsibility exercised by that body.

A Fair and Consistent Process

Consideration must be given to the best means of incorporating assessment of the environmental effects of projects into the system, in a manner that will meet objectives, while minimizing unnecessary delay and red tape.

It is important that the land-use planning process, including procedures for development review, be established in a way that:

- ensures compliance with all necessary requirements;
- provides a co-ordinated and efficient approval process;
- encourages public participation and input at the earliest possible time;
- encourages issue-oriented examination of proposals;
- encourages developers and others to prepare applications or objections adequately, with background information included; and
- includes enforced time periods and sanctions for abuse of the planning process.

It is essential that information, issues, and arguments relating to any given proposal are known and available to the public and to decision-makers, in time to permit assessment of applications on the basis of known data, including the accumulation of data relating to recurring issues. Where possible, a single application should be used to dispose of all issues relating to the same matter, including servicing, municipal requirements, environmental assessment, and the application of principles of good planning.

There would appear to be a significant degree of consensus in support of a number of principles that could be embodied in procedures for protecting the environment through the land-use planning process, including the following:

- The system should be constructive and helpful to those affected by it and those implementing it.
- The administrative process should be efficient and expeditious, achieving its aims with the least expenditure of time and human and financial resources, consistent with the achievement of its objectives.
- The administrative system should be flexible and adaptable, capable of dealing with individual cases in a manner appropriate to the scale, nature, likely implications, and location.
- The approval system, including recourse against decisions, should be fair and open to the full and effective participation in good faith by all legitimately affected individuals and groups.
- The system should be consistent and predictable, so that all initiatives of a substantially similar nature will be subject to the same established rules, standards, and criteria, while maintaining the ability of the system to develop and improve upon such requirements on the basis of experience and acquired knowledge in a manner consistent with ensuring fairness in the system.

- As far as possible, the adjudication of issues should be based on co-operation and conflict resolution rather than adversarial procedures.
- The system as a whole should be rational, clear, and comprehensible.

Building on Consensus

In the same manner that this report builds on what it feels is a consensus in support of its recommendations, the evolution and development of any improvements to the system, or a new system, should attempt to identify public expectations and objectives, for both the short and the long term, and build on consensus where it is found.

The present system seems to place substantial emphasis on adversarial proceedings and formal dispute resolution. It is desirable to seek ways of avoiding the confrontational atmosphere that now pervades, and the tendency of the present system to drive parties to seek Ontario Municipal Board orders. For example, emerging techniques of alternative dispute resolution should be developed and considered as a possible means of dealing with this problem. However, consideration of these techniques should not be taken as suggesting that the rights of appeal that currently exist should be removed.

By seeking to find consensus, unnecessary confrontation can be avoided. *Watershed* set out objectives for achieving proper environmental protection through mechanisms such as partnership agreements, and for expanding and systematizing public consultation in developing plans. It emphasized the need for co-operation, with public and private participants being part of the process as a means of achieving a system acceptable to all concerned.

Where Do We Go from Here?

Previous chapters have identified problems and weaknesses in the land-use planning process, and the need for integrating into the process strategies and measures to protect the environment systematically and comprehensively. We noted earlier that there is a

consensus that change is required, and have outlined general principles as a basis for implementing solutions to land-use planning problems. In the two remaining chapters, we set out proposals for immediate and longer-term measures that should be pursued by the Province of Ontario in order to achieve change based on principles of environmental protection.

CHAPTER FOUR

INTEGRATING ENVIRONMENTAL CONSIDERATIONS INTO THE PLANNING PROCESS: SHORT-TERM REFORM

Experience in Ontario has shown that reforming the land-use planning process is a complex and difficult process. However, reform is needed. Based on the principles discussed in the last chapter, some reforms may be fundamental and long-term in nature. Many improvements, however, can be made in the short term — almost immediately, in fact. And a start can be made now on some which would be fully implemented later on.

This chapter has two purposes. One is to suggest a process for achieving long-term, fundamental reform to ensure the integration of environmental considerations into the land-use planning process. The other is to provide some specific recommendations for more modest, short-term reforms that can be undertaken now, starting in the next few months, without any legislative amendments or changes.

Planning for Sustainability: A Call for a Provincial Inquiry into Land Use and the Protection of the Environment

Previous chapters recognized that fundamental reform may be needed to improve the land-use planning system in Ontario so that it ensures environmental protection and sustainable use of natural resources. We recommend that, as a means of developing a long-term reform agenda, a provincial inquiry be established immediately so that it can report back to the government within two years.

That recommendation is justified on a number of grounds. First, while there appears to be consensus on general principles, as suggested in Chapter 3, there is no consensus in Ontario regarding the nature, the substance or even the scope of long-term reforms. This conclusion is supported by many of the submissions made to the Environmental Assessment Advisory Committee during the review of the Environmental Assessment Program this year (see Box 2).

Second, there is a need for a comprehensive and thorough examination of the alternatives, a task that was not undertaken in this report. Finally, there should be a forum to allow members of the public to express their views and ideas so that everyone can

Selected Submissions to the Environmental Assessment Advisory Committee on Ontario's Environmental Assessment Program 1991

Individuals and groups involved in land-use planning processes are unanimous in their desire for a better way to do things. Although there has been no formal discussion of the issues, some indications of the variety of opinions can be gleaned from the current review of the Environmental Assessment Program (EAPIP), which has prompted many comments on the relationships between EA and planning. The following quotes illustrate both the desire for change, and the range of options proposed by different groups.

Urban Development Institute:

UDI strongly approves of the Document's statement that future recognition of environmental considerations in policy and program development can be achieved separately from the EA Act. UDI submits that through the Planning Act, environmental concerns can best be accommodated within the private sector development projects. The Planning Act is proven legislation that UDI believes is best suited to facilitate private sector development, and furthermore, this Act offers many opportunities for environmental review.

Ontario Society for Environmental Management:

The EA principles need to be integrated into other legislation, such as the Planning Act.... The EA Act should complement other programs and its principles should be built into other planning processes. It cannot be all things to all people.

Canadian Environmental Law Association:

CELA considers that a reformed Planning Act should continue to govern the process of land-use planning and approvals for small-scale, private sector developments such as housing. We see the role for EA in the land-use planning process at this new, regional, preferably ecosystem-based level of planning. These new plans should be subject to environmental assessment.

Association of Municipalities of Ontario:

Recommendation: That the Planning Act and the Environmental Assessment Act, as well as any other pertinent legislation, be amended to ensure better integration of the planning and environmental assessment processes in Ontario.

We would like to see a situation where, when an undertaking is the responsibility of a municipality, ... it could be dealt with by the municipality through a planning process which has been amended to include mandatory Environmental Impact Assessment.

contribute to a better land-use planning system.

The mandate of such an inquiry would be to identify problems with the present process, examine a range of reform options, hear from the public and all interested parties on the feasibility and desirability of the options, and then report to the government on recommendations for reform. Proposed terms of reference for the inquiry are outlined in the next chapter.

The Need for an Interim Reform Agenda

While the proposed inquiry is being conducted, a number of measures could be taken to deal with certain gaps, weaknesses, and limitations in the present process. Such measures could be put into effect through provincial policy; fiscal and resource allocations; regulations made under various statutes; new administrative rules; or statements in the legislature. Short-term reform is predicated on the assumption that the improvements, though modest, would be a step in the right direction of seeking to protect and enhance the environment. There are at least four reasons to support a short-term reform agenda.

1. The Problems Are Urgent

As *Watershed* made clear, the natural resource capital of many areas of the province, and in particular the Greater Toronto region, is under severe stress. Unless development is undertaken in an environmentally sustainable manner, the quality of life in the province is at risk. If no attention is paid to the area's environmental capital, new housing starts and other essentials of economic prosperity will be delayed. That would have an impact on employment and the standard of living for many, if not all, residents.

In the interim, it is essential to find ways to better integrate environmental considerations into the planning process in order to minimize ongoing damage to the environment. The current system seems incapable of dealing adequately with protecting or rehabilitating the environment.

2. The Need to Get the Public Informed and Interested in the Issues

At this stage, while there is no crystallized vision of what the “ideal” system should be, debate on the possible features of a reform package should be encouraged. There is a need in the interim phase to inform the public, identify initiatives that have worked elsewhere, and elicit ideas from both private and public interests on what should be done.

3. The Need to Assess What May Work in Practice

The next two years could be the ideal time to try ideas and innovations proposed in the short-term framework and to learn what their merits and limits are. Given that ill-conceived reforms are far worse than no reforms at all, testing the waters of this modest reform agenda may prove to be prudent.

4. It Is Possible to Improve the Process Now

Many short-term reforms can be carried out under the present legislative framework. It is in the best interests of the environment and the process to establish any possible reforms as quickly as that is feasible.

But questions remain. If there is to be a short-term reform agenda over the next two years, what kind of interim reforms can be undertaken? Who should undertake them and how?

Governing Assumptions for Short-Term Reforms

In undertaking such reforms, a number of assumptions must be kept in mind:

- The focus should remain on the Greater Toronto region because it is here that the greatest environmental stress and development pressures have been identified. At the same time, however, it is clear that the principles for reform in the region may extend well beyond that geographical area.
- Reforms must be practical in the sense that they can be

implemented without an overall revamping of the regulatory framework governing land-use planning.

- Some reforms could be implemented immediately, while others would develop over the next two or three years, pending introduction of the broader reform package.
- Ways must be found to improve opportunities for full public participation in the land-use planning process.

Nature of the Reforms

There are, at this time, numerous areas in which interim reform would be important and relatively straightforward. These include:

- developing provincial policies;
- enhancing provincial planning capacity;
- identifying what the Province would require concerning official plans;
- developing partnership agreements; and
- improving the development approval process.

There is no reason to feel that such reforms would preclude longer-term legislative changes: they could, in fact, set the stage for such changes.

Development of Provincial Policies

A major weakness in the land-use planning system in Ontario is the provincial government's lack of leadership, co-ordination, and direction in the land-use planning process. This weakness is clear in the lack of economic and environmental strategies that would bring together the sometimes divergent courses taken by the ministries responsible. Such strategies would establish a clear framework of policy within which the municipal and regional land-use planning process could function.

The Province's first step in re-establishing its leadership in this area would be to establish provincial interests by developing poli-

cies, as envisaged and provided for under Section 3 of the Planning Act.

While the Planning Act anticipates the development and promulgation of provincial policies, the Province has not done so. In the last major reform of the Planning Act in the early 1980s, the intention was to create a comprehensive and coherent set of provincial policies that would provide a policy framework for implementing the Act.

In fact, since the early 1980s, only a few policies have been adopted (there is one, for example, on housing) and even some of those remain in draft and weak form (such as the wetlands policy).

Therefore, the first major imperative interim reform is to develop and enact this “other half” of the Planning Act by formulating a series of provincial policies. In the course of developing these provincial policies, a number of issues should be kept in mind.

Scope of Provincial Policies

As mentioned in Chapter 1, the Commission has focused on the inadequacies of land-use planning in the Greater Toronto region, where severe environmental pressures arise from strong demands for development. It is possible and preferable (using legislative tools under the Planning Act) to produce policies for the Greater Toronto region as a priority, although policies could be formulated and implemented in other geographic regions in the province.

The Nature of Provincial Policies

It is important to consider the nature and content of provincial policies and how they could help implement the goals set out in the Planning Act and in other legislation governing or affecting land-use decisions. Clearly, many of the issues to be addressed are difficult in a policy sense. Although it may take some time to develop, consult, and declare such policies, the present policy gaps will persist until the process begins — and it should begin immediately. Each policy would:

- have clearly stated goals that would include a brief descrip-

tion of benchmarks, targets, and rules of interpretation to impart a strong sense of direction on the Province's intentions and would add clarity and predictability to the system;

- be developed within the context of a complete set of policies, so that they could be integrated as much as possible: for example, a housing policy should take into account such issues as transportation, energy, and water consumption, heritage conservation, employment generation, and densities, among others. However, it is still probable that, in specific cases, conflicts between applicable policies will arise. It may be helpful to develop criteria or principles to resolve potential conflicts and ensure environmental protection;
- have a built-in review mechanism to deal with reaction to implementation and suggestions for improvements to policies; and
- be mandatory, with each municipality having to ensure that it complied with these policies. The Planning Act's current directive that each municipality must have "regard to" these policies would be reformed to say that municipalities must comply with provincial policy. If policies were mandatory, all municipalities would have equal responsibilities. Failure to obey would result in either direct provincial action to seek compliance or in the Province withholding funds to the municipality.

Some Possible Directions for Provincial Policies

While it is beyond the scope of this report to consider the substantive content of provincial policies, it is reasonable to suggest some policy directions in this regard. For example, a more generic provincial policy that establishes a provincial framework for environmentally sustainable planning would integrate various policy components and provide an overall vision for the planning process. On the other hand, some fear that, given the variety of competing interests it would have to take into account, such a document might not sufficiently reflect environmental priorities. In any event, implementing policies would still be required. At a minimum, the following policy areas must be addressed:

1. Rural land and natural heritage policies: what policies are needed to protect agricultural lands? How can such policies address such problems of rural-urban interface as urban shadow? How should severances be dealt with and how can clearer and more consistent rules be made with respect to them? What policies should be generated to protect and restore features of natural and cultural heritage such as wetlands, valleys, fisheries, and other significant wildlife habitats, woodlands, geological and historic sites?
2. Compact community policies: what direction should policies take regarding development and redevelopment in view of land conservation policies and the growing interest in intensification?
3. Transportation policies: how can transportation policy promote environmentally sustainable planning, such as intensification rather than sprawl, public transportation rather than vehicular use? Should priority be given to maximizing direct access to services, shopping, employment, and public transit to more distant destinations?
4. Conservation policies: what policies can be developed to conserve water, energy, timber, aggregates, and other resources? What mechanisms should be put in place: appropriate pricing, efficiency standards, education, waste reduction, re-use, and recycling?
5. Infrastructure renewal and rehabilitation: what specific policies should be developed to encourage rebuilding urban infrastructure: addressing combined sewer overflows; managing storm water; and updating sewer and water treatment facilities?
6. Environmental quality: how should air and water quality programs, Remedial Action Plans (RAPs), fisheries plans, and watershed management plans be integrated and incorporated into the planning process? What measures should be enacted to deal with clean-up of contaminated sites?
7. Land-use compatibility: how can policies be developed to avoid conflicts resulting from inappropriate juxtaposition of

sensitive uses (such as housing) with disruptive or hazardous ones (such as some industries and airports)?

8. Shoreline regeneration: how can development along the shorelines of lakes and rivers contribute to ecological restoration, instead of creating further degradation? What policies should guide lakefilling, shoreline protection, and other activities at the land-water interface?
9. Urban development policy: what policies should be established for ecologically appropriate urban development, including consideration of such issues as protecting trees and topsoil, and taking into account hydrology and biodiversity?

The Provincial Role in Enhancing Municipal Planning Capacity

If the government is committed to protecting the province's natural resource base and promoting a more sustainable environment, there is an urgent need to devote more resources to many facets of environmental planning. Better planning will be needed in everything from reviews and comments on official plans to developing and updating provincial policies. Therefore, the Province must devote more resources and, at the same time, ensure that municipalities do so as well. This short-term reform would immediately encourage better planning and a fair, efficient process in which matters are dealt with systematically and comprehensively.

But increased resources are not the sole answer. The Province must take the lead in developing educational materials and better training of professionals in ecosystem planning and related matters. Better materials and training should be made available to municipal planners, OMB members, the legal community, schools, ratepayer and community groups, and agency officials, along with other similar interests.

Provincial Requirements Governing Official Plans

Overview: An Enhanced Role for Official Plans

In theory, one of the most important planning mechanisms for protecting the environment is the Official Plan. It should be a central guiding document for municipalities when they decide on development that sustains the natural resource base of their area. Official plans and official plan amendments can and must be used as a way of incorporating provincial policies and of defining municipal environmental targets. The official plan promotes good development while restricting land uses that are environmentally insensitive. It should become, in effect, a “greenprint” for an area. With better initial plans, the need for amendments should be diminished. Broadly speaking, development approvals would be governed by provincial policies that had been embodied at the front end of the land-use planning process.

There are three primary benefits to emphasizing environmental considerations when preparing an official plan:

1. An ecosystem approach to land-use analysis can be more easily implemented when it is based on a broader planning perspective. For example, while the cumulative effects of development cannot be taken into account on a case-by-case basis, a more holistic and integrated approach can be taken if the ecosystem concept is applied to the official plan.
2. Focusing on environmental considerations in official plans gives the development process a greater degree of certainty and predictability. At present, there is great uncertainty because such considerations are delayed until an application for approval of a development has been made. At that point, the basic question of whether to develop a property at all remains to be answered, until an exhaustive site-specific analysis has been completed — often after a considerable investment in property has been made.
3. Official plans give the opportunity to integrate the views of all provincial ministries and relevant conservation authorities.

This will guide landowners in the matter of what uses the various levels of government feel are appropriate and the environmental sensitivity and economic development that govern their land-use decisions. (We have already commented on the need to provide a measure of stability to land-use control and keep official plan policies from being changed or amended on an ad hoc basis.)

An ecosystem approach to planning identifies and integrates objectives, targets, and policies. Clearly, great emphasis should now be put on the early stages of the planning process — the official plan preparation process — rather than at the tail end, the development approval stage. This is not to say, however, that an exclusively “top-down” approach is appropriate: while the front-end emphasis is designed to prevent problems, there is a need to incorporate local considerations and opportunities for effective community participation into the process.

This ensures that, even if a development is allowed within the context of the official plan, the development itself is undertaken in an appropriate way. For instance, it is important that urban design considerations be taken into account to ensure that a sense of community is maintained, or that streetscapes are built to human scale. Similar approaches should also be applied to rural landscapes.

Provincial Requirements Pertaining to Official Plan Preparation

From the outset, provincial policies must be incorporated into the municipal and regional plans, as a minimum requirement. As it happens, many municipalities and regions are now undertaking reviews of their documents as part of a process that occurs about every five years. This, then, is an ideal time to incorporate interim policies into official plans, particularly those in the GTA. A municipality not currently reviewing its plan would be required to incorporate such policies by means of amendment.

Environmental Factors in Official Plans

This process would clearly define the Province's leadership in guiding economic development and environmental protection. It should require every official plan to expressly link development activity and the environment. To do this, an official plan would include provision for assessing how it would affect, protect or be integrated with environmental considerations. Some of those are:

1. Environmental protection considerations: protecting surface waters, groundwaters, air, and soils from contamination through such conservation strategies as storm water management and user pay. Groundwater protection can be encouraged by promoting permeable surfaces, retention ponds, vegetation, and other such measures that minimize run-off. Shorelines and fisheries should also be protected.
2. Protection of natural resources of local and regional significance: these include wetlands, geological features, tributary streams, habitats of locally/regionally rare species, woodlots, and river valleys and the links between them. Protection of such resources could be achieved by requiring that inventories be made of such features and targets for protecting them be established. Areas of provincial significance should also be protected.
3. Design guidelines: these can be used to enhance streetscapes and rural landscapes, as well as unique architectural features. The purpose is to create liveable, human-scale cities and take into account urban design and density goals. Heritage conservation could also be a part of this consideration.
4. Protection of agricultural and rural lands in relation to urban growth.
5. Promoting the concept of "net environmental gain": developments should be assessed for their potential to contribute positively to rehabilitating the environment, by restoring damaged habitat and natural areas and revegetating areas, among other measures.
6. Evaluating transportation networks with a view to enhancing and encouraging public transit and de-emphasizing private

automobile use. These networks should also be considered in relation to goals of reducing energy use and promoting air quality objectives.

An Inventory of Existing Conditions

To be useful, a decision must be built on good information. However, most municipalities may not have undertaken comprehensive ecological inventories or financial studies needed to understand how economics and the environment affect a region. Such studies should be part of an ongoing process; some areas have begun this process, but most have not. Initially the Province would have to provide professional assistance and funding to those that have not, particularly in the research necessary to acquire a factual data base on flood plain mapping, biological surveys, and detailed financial analysis not already at hand.

Conducting biological inventories and mapping flood plains are vital first steps to dealing with such problems as cumulative effects and are also an integral part of ecosystem planning. Integrating and analysing information are important to understanding ecosystem health. In turn, they make it possible to understand constraints, opportunities, and limits within the ecosystem; therefore, biological inventories and other such studies should be a first priority and be undertaken immediately.

Although gathering, analysing, and maintaining environmental information is an ongoing process, it should be noted that the need for good information should not be interpreted as an excuse for inaction. Decisions — about development, environmental protection or other matters — must be made at the appropriate times with the best available information, and with explicit recognition of any gaps in the information base.

Provisions for Monitoring for Non-Compliance with the Official Plan

In light of the above requirements, some system must be put in place to monitor compliance with official plans, for example by requiring that municipalities report on the progress they are making in this regard.

In summary, it should be emphasized that the Province will have to require all municipalities to have official plans and to meet these minimum standards outlined above. The suggested changes are offered at a particularly opportune time, when most of the local and regional municipalities in the Greater Toronto region are reviewing their official plans.

The Role of Partnership Agreements

Apart from the general planning processes in the province, special attention should be devoted to environmentally significant areas or areas where there are acute land-use conflicts (such as the Oak Ridges Moraine and the Niagara fruit belt). At present, existing planning regimes are difficult to apply on a watershed basis. While conservation authorities may be empowered to develop watershed plans, they lack the authority to implement them. Moreover, there are other areas that perhaps should be considered for such attention, including the Remedial Action Plans (RAPs) that are an attempt to develop multi-stakeholder remedial options for contaminated or severely impaired uses in 17 Ontario areas.

But what way should be used to assure these areas get the special attention they deserve? There are a number of options, one of which is to develop instruments to overcome the problems of jurisdictional diversity and fragmentation of planning approaches. The Niagara Escarpment Commission is an example.

While that method is worth considering, it probably cannot be considered "short-term". Moreover, there is a lively debate — which is well beyond the scope of this paper — about the merits of an institutionalized approach.

Another possibility is to develop procedures for bringing together stakeholders in an attempt to define goals and deal with common objectives, in the context of "partnership agreements". Such agreements could include provisions to cope with many inter-jurisdictional problems and use a more ecosystem-based technique. The agreements could be negotiated at any time to define roles and responsibilities, incorporate planning targets, and include accountability mechanisms. While they may not be long-term, definitive responses, they could set the stage for longer-term regimes.

Reforms to the Development Approval Process

While the thrust of short-term reforms would focus on improving official plan preparation, renewed attention must also be given to the environmental protection opportunities that can be made part of the approval process. Among the proposed short-term reforms:

Environmental Performance Requirements

While the negative impact of development on the environment is the focus for some projects, there is a need to emphasize damage prevention in development applications. Clearly stated "performance requirements" would ensure certainty and consistency; they could include greenspace protection, setbacks/buffers for natural areas, energy efficiency, conservation, adherence to ambient and indoor air quality standards, dust control during demolition or excavation of contaminated soil, waste management, noise restrictions, storm water management, and habitat restoration.

Statement of Development Effects

Applications should be required to include a statement of known or suspected environmental effects of the proposed developments. These would include economic, municipal, financial, environmental, and social effects, which would be specifically and clearly defined. If negative effects have been identified, the proponents would be required to either avoid or mitigate them. Among the mechanisms available in this regard are new provisions for site plan agreements, and plans to enhance the environment by restoration of areas, planting of trees, etc.

Public Consultation on Development Projects

In addition to having public consultation and input concentrated at the official plan review or preparation stage, it should be normal municipal practice to inform the public, at the earliest possible stage, of an application. This will give people enough time to make their views known and to participate in debate leading to a

decision. By enshrining the role of the public and providing for early consultation, the planning process will actually become more efficient. Rules and procedures will be clear and predictable and, at the same time, everyone — developers, the public, and government — will benefit from an open, participatory process.

CHAPTER FIVE

PLANNING FOR SUSTAINABILITY BEYOND THE SHORT TERM

Like most governments in the developed world, both Canada and Ontario enthusiastically embraced the Brundtland Commission's principle of sustainable development. As authors Herman Daly and John Cobb have noted, one reason for the unanimous support given to the phrase is that it is rather vague: development is not distinguished from growth and there is no distinction between strong and weak sustainability. It has been suggested that this was deliberate: the Commission wanted to put on the international agenda (as it now has) a concept, the unstated implications of which were too radical for consensus at that time.

Vagueness as a deliberate strategy may be a clever way to elicit support for a broad concept, but applying the principle to complex and specific policy areas such as the integration of environmental and land-use planning objectives requires clarity and precision. The policy will have to be applied consistently and immediately to thousands of decisions daily — those that involve valuable private property rights and complex questions of public values. There will be winners and losers.

Therefore, any significant policy change related to land-use matters requires an extensive process of public consultation after a thorough study of the issues. Because of the constraints of the bureaucratic system, we have recommended that the study and consultation occur at arm's length from government — that's why we have called for a commission of inquiry. The inquiry report will facilitate the process by outlining options that will then leave government to make the hard, specific decisions.

The policy can be changed, but until it is, government cannot hide behind vagueness; all parties should know and understand the rules of the game, even if they don't agree with all of them. Whatever else may cause disagreement, on this point, we find, all parties agree.

The call for clarity and precision is equally applicable to our other two longer-term recommendations: the need to develop comprehensive policy statements and the need to do more regional planning, particularly in areas under stress such as the Greater Toronto region.

Having earlier set out some short-term reforms and recom-

mended the immediate creation of a provincial commission of inquiry, we conclude by elaborating on the proposed commission and we set out a draft of terms of reference. We also describe two other longer-term recommendations.

Commission of Inquiry into Land Use and the Protection of the Environment

As discussed previously, the lack of consensus on solutions, the need for full public consultation, and the sheer complexity of the subject combine to preclude detailed longer-term recommendations until issues have been thoroughly studied and publicly debated.

As also discussed earlier, the lack of inter-ministry co-ordination is at the heart of many of the problems under discussion. The inquiry recommended here should have the strong salutary effect of encouraging various ministries and agencies to collaborate and compromise so that they could minimize existing differences.

Of course, every effort should be made by the inquiry to elicit the full range of public positions. Early consideration will have to be given to whether and how to fund members of the public and their organizations to allow them to participate fully.

To illustrate the scope of the investigation we envisage, we have created a first draft of suggested terms of reference (see Box 3).

The Need for Provincial Policy Statements

The last major amendment of the Planning Act, completed in 1983, foresaw the declaration of comprehensive, complementary policy statements pursuant to Section 3. The failure to follow through with these is at the heart of the problems identified in Chapter 2. In Chapter 4, we recommended that provincial policy statements be adopted, but we recognize that doing so may involve issues that are both too complex and too controversial to be developed quickly.

There is a need for a comprehensive set of clear and effective policies governing land use, urbanization, and environmental protection. Given that "everything is connected to everything else", as

noted in *Watershed*, these policies must form a coherent system. Policies for resource conservation and protection of greenspace, water quality, habitat, and other aspects of the environment will have to be linked to agricultural and urban land-use policies which, in turn, will have to be linked to economic development policies and to plans for major spending on infrastructure such as transportation and water-supply services. Where necessary — for example, in particularly environmentally sensitive areas or those that are valuable as a resource but subject to strong growth pressures — the policies should be expressed, in part, in the form of explicit land-use designations, or sub-provincial plans.

The Need for Regional Planning in the Greater Toronto Region

In comparison with many other international urban centres, the Greater Toronto region offers a high standard of living. But the forces of suburbanization that have characterized growth there are seriously eroding its social, environmental, and economic fabric. The Greater Toronto region is rapidly outgrowing the infrastructure needed to support its population. Among the key reasons:

- lack of major new infrastructure projects conceived and initiated since 1973;
- continued population increase of about 75,000 people each year;
- continued traffic growth of six per cent per annum, which will triple traffic volumes by 2011;
- growth constraints in most regions because of inadequate sewage services;
- lack of clear and consistent planning and leadership; and
- fragmented decision-making at both the provincial and the municipal levels.

If these trends continue, real economic decline is likely. As development pressures increase and land prices escalate, there is a mounting push to use farmland and greenspace for other purposes.

Inquiry into Land Use and the Protection of the Environment in Ontario: Terms of Reference

RECOGNIZING that population growth and economic expansion will continue in Ontario for the foreseeable future;

RECOGNIZING that demographic, economic, and technological change are constantly taking place;

RECOGNIZING that these changes affect not only urban areas, but also the economy and way of life based on primary resources including agricultural land and forests;

RECOGNIZING that the supply of good housing and of employment, recreational, and other opportunities are essential to the well-being of the people of the province;

RECOGNIZING the special interests of the aboriginal peoples of Ontario in the lands they have traditionally used and occupied;

RECOGNIZING that these conditions have important implications for the state of Ontario's biophysical environment and the conservation of its natural resources;

RECOGNIZING that all these matters are closely interrelated;

RECOGNIZING that in these circumstances it may be appropriate to make changes in some or all laws, forms of government, public agencies and institutions, and administrative structures and procedures affecting land use, natural resources, and the biophysical environment;

NOW THEREFORE pursuant to the provisions of the Public Inquiries Act,
_____ be appointed to inquire into and make recommendations relative to:

the wise use of land in Ontario, protection of the integrity of ecosystems, including the biophysical environment, and the conservation of natural resources;

the adequacy and suitability of the law, including the Planning Act, the Environmental Assessment Act, the Conservation Authorities Act, and any or all other pertinent statutes and regulations;

the nature, allocation, and execution of pertinent responsibilities among ministries and agencies of the provincial government, municipalities, quasi-judicial bodies, and other public bodies, with respect to planning, administration, decision-making, and operations;

the nature of the policies and plans which should be adopted by the provincial government, and the means, structures, and procedures for developing, co-ordinating, executing, and enforcing such policies and plans;

the need for, nature, and subject matter of sub-provincial policies and plans, or for policies and plans relating to particular parts of Ontario other than municipalities, and the means, structures, and procedures for developing, co-ordinating, executing, and enforcing such policies and plans;

the implications of province-wide and sub-provincial policies and plans with respect to all areas of responsibility of the provincial government;

the planning and management of Crown lands and of natural resources;

the relationship between province-wide and sub-provincial policies and plans, and the statutory responsibilities of municipalities and other public bodies;

the feasibility and means of linking planning and environmental assessment law and procedures in such a way as to enhance the effectiveness of both;

the feasibility and means of improving administrative and approval procedures with respect to efficiency, expeditiousness, and equity, without prejudicing environmental and conservation values;

the feasibility and means of improving municipal planning instruments and planning administration with respect to effectiveness and efficiency, without prejudicing environmental and conservation values;

AND in particular, without limiting the generality of the foregoing, to consider:

the recognition that the safeguarding of environmental values and of ecosystem integrity should be basic goals of policy and planning at all levels;

the application of a form of environmental assessment or environmental review to all policies, plans, and substantial proposals, according to the nature, scale, and likely impact of the policy, plan or proposal rather than to the identity of the author or proponent;

the means of easing, managing, and directing growth pressures in south central Ontario in order to secure environmental protection, resource conservation, and efficient use of land;

the application of effective environmental protection and resource conservation policies, plans, and procedures with respect to Crown lands and resources;

the appropriate roles of the Ontario Municipal Board and the Environmental Assessment Board, or of a successor board or boards, relative to the appropriate responsibilities of elected bodies, with regard to decisions on matters of procedure, equity, interpretation of policy, and substance, respectively;

the resources and procedural changes, if any, required by these boards to enable them to carry out their responsibilities more efficiently and equitably;

clarification of the nature, purpose, and content of the municipal official plan.

We believe that the work of the inquiry could be completed in two years allowing its final report to be released while the government has one year left in its mandate giving it sufficient time to act, including time for the introduction of legislation to implement whatever policy is determined.

It is not just the amount of growth, but its form and density that will determine how much land remains available for other uses. Thus, our settlement patterns determine our overall quality of life.

The vitality of the Greater Toronto region is linked not only to its economic prosperity, but also to the types of natural and built environments available for its people. A balance between economy and environment must be struck. People have new values, and feel strongly that the environment can no longer be seen as an afterthought, but must become integral to our policies and decision-making processes.

The Greater Toronto region is at a pivotal stage of growth. No one government is able to provide everything this emerging megalopolis needs, particularly infrastructure, environmental protection, and co-ordination among neighbouring municipalities. Jurisdictions are complex and include 28 provincial agencies with responsibilities for different aspects of life in the region, and 35 municipalities administering individual regions, cities, and towns. The resulting duplication and inefficiencies are staggering, and the overall consequence is an inability to act in concert.

Taken together, the need to restore and maintain ecological health, the need to reconsider patterns of development, and the current jurisdictional paralysis all point to the importance of an integrated planning process based not solely on political boundaries, but on the Greater Toronto Bioregion. That kind of regional planning should be based on an ecosystem approach, to anticipate and prevent ecological degradation and enhance economic development. An ecosystem approach will result in land-use planning that places more emphasis on:

- ecological health and quality of life;
- long-term sustainability;
- interactions within ecosystems; and
- co-ordination and consultation.

Implementing ecosystem-based planning will demand some major changes to current practices. Those will not occur until a great deal of thought and discussion has gone into the process. To

help get it started, Appendix A of this report offers one possible framework for ecosystem-based planning.

Planning for Sustainability

There is growing realization that the environment and economy are mutually interdependent. The provincial government emphasized this in the November 1990 Speech from the Throne:

There is an environmental crisis facing Ontario and it will require an extraordinary effort to meet it. We accept our duty to the future. We will need to assess our decisions not only by standards of social justice or economic growth, but in terms of their ecological integrity. We know that we cannot have a healthy economy without a healthy environment. A sustainable economy will provide added opportunities for new jobs, which will last into the future, and which will enhance, rather than harm, the environment. Our environment is more than the natural landscape. It is our individual health and well-being. It is our children's future.

In the past, Ontario's economic success and abundant natural resources have enabled us to take both for granted. We can no longer afford this luxury. We cannot allow outdated and conflicting policies, combined with the constraints of severe jurisdictional gridlock, to thwart the opportunities for regeneration and a sustainable future.

Instead, we need to marshal our resources in a concerted and planned effort to nurture both our economy and our environment.

How will the goal of sustainability affect future approaches to planning? One of the most fundamental implications is the need to take a long-term view, one that stretches well beyond the three to five years of a politician's term of office and even beyond the ten-year time horizons usually adopted for municipal planning. We need to think in terms of what communities, and their environments, will be like in 30 years. This is difficult to imagine, but must be addressed if we are serious about working towards sustainability.

As mentioned earlier, the global implications of sustainability

are immense, and can easily paralyse our thinking. We must, as the saying now goes, "think globally and act locally" so that, at the scale of an individual municipality, region or province, it becomes possible to take meaningful action. Collectively, individual efforts undertaken with an awareness of the "big picture" should gradually move us to a more sustainable future.

Planning for sustainability also means becoming more aware of the connection between land use and such matters as resource use, waste generation, and pollution of air, land, and water. Essentially, that requires taking a more holistic view of planning for human activities, beyond the traditional focus of land use, and in the context of the whole ecosystem. It does not imply that growth and development cannot occur, but that they must be undertaken with greater awareness of all their effects, and more carefully to ensure protection of environmental and community values.

In the future, policies, plans, and proposals should not be judged solely on their economic merits, or on their contribution to housing, recreation or other social objectives. They must also be judged on whether they contribute to the regeneration and sustenance of the ecological health of the bioregion. We cannot do this by planning around the environment; we have to learn how to plan with it, if we want both environmental and economic sustainability.

Appendix A

Discussion Paper

Towards an Ecosystem Approach to Land-Use Planning

by Suzanne Barrett and Kate Davies

June 1991

In *Watershed*, the Royal Commission expressed the view that there is a need for fundamental change in the manner in which growth and development are planned in Ontario. The Commission stressed the importance of the biophysical environment to human society as a fundamental context within which social and economic objectives may be pursued. It recommended that "as a means of achieving the integration of environmental, social, and economic concerns", all federal, provincial, and municipal governments and agencies should adopt the ecosystem approach as a basis for planning.

What might an ecosystem approach to planning look like? This paper proposes a possible framework as a basis for discussion and debate. It developed from work undertaken by the Royal Commission during the environmental audit of the East Bayfront/Port Industrial Area, published in *Pathways*, and from a project on cumulative effects assessment, published in a working paper, *Towards Ecosystem Planning: A Perspective on Cumulative Environmental Effects*.

Ecosystem Concepts

Thinking about "ecosystems" in the context of planning and managing human activities represents a major shift in attitude from the more traditional views of the environment. The environment comprises all the conditions and influences surrounding an organism. In contrast, an ecosystem is an interacting system of air, land, water, and living organisms: any individual organism is an integral part of the system.

A simple analogy: the environment is like a house — bricks and mortar — whereas the ecosystem is home, encompassing activities, processes, and qualities as well as physical structure. (See the Royal Commission's reports *Watershed* and *Pathways* for a fuller discussion of ecosystems.)

How, then, does the ecosystem concept affect planning activities? It suggests many alternatives to traditional ways of doing things. For example, an ecosystem approach should:

- encompass natural, physical, social, cultural, and economic considerations, and the relationships among them;
- focus on understanding interactions among air, land, water, and living organisms, including humans;
- emphasize the dynamic nature of ecosystems;

- recognize the importance of living species other than humans, and of future generations; and
- work to restore and maintain the integrity, quality, and health of the ecosystem.

A key to understanding ecosystems is therefore to recognize that "everything is connected to everything else" — one reason why cumulative effects occur as a consequence of many actions in an ecosystem. For example, water pollution along Toronto's waterfront represents the combination of many influences, from development in the head waters of the rivers, to storm water management in the suburbs, to sewage treatment on the lakefront itself. Understanding these relationships leads to the realization that human activities should be viewed not as isolated events in space and time, but as interacting with pre-existing conditions and contributing to changes in ecosystem health.

Another important point to note is that, because ecosystems include humans, their needs and activities — the matters we think of as community and economic concerns — are just as much a part of the ecosystem as the natural and physical environments. The ecosystem approach helps us to recognize the dependence of human communities and economic systems on a healthy environment, including: clean air, land, and water; renewable and non-renewable resources; natural areas and wildlife.

In turn, the health of the biophysical environment is affected by the choices humans make about their activities — not simply between "development" and "no development", but about where development can occur, and how it should be undertaken.

An Ecosystem Approach to Land-Use Planning

The current land-use planning and environmental assessment practices in Ontario do not make for a comprehensive ecosystem approach to planning. Although land-use planning decisions often reflect some form of environmental consideration, apart from the Niagara Escarpment Plan, no comprehensive, ecosystem-based planning has taken place in the Greater Toronto region.

Typically, the environmental assessment process focuses on the effects of a specific project, and does not assess the cumulative effects in an area of many activities over time.

The following framework for ecosystem-based planning is based on traditional land-use planning, with elements of the envi-

ronmental assessment process added. Its purpose is to provide a means of evaluating the social, economic, and biophysical components of ecosystems and the interactions among them, and considering alternative scenarios for change that would promote and protect ecosystem health. Although we recognize that there are many limitations to implementing such a framework (information, analytical capability, predictive methods, etc.), the processes that it embodies are an essential first step to improving specific methods.

In order to ensure maximum flexibility in considering options, the framework was deliberately developed independent of the provisions of existing legislation such as the Planning Act and the Environmental Assessment Act. A range of approaches could be used to implement the framework: using existing legislation without modifying it, making minor changes to existing laws, or fundamentally changing legislation.

The suggested framework differs from traditional land-use planning practice in several respects:

- ecosystem health, sustainability, and quality of life are more highly valued;
- greater emphasis is placed on the biophysical environment;
- interactions among components of the ecosystem are emphasized;
- the boundaries of analysis are expanded, when necessary, to recognize ecosystem processes that transcend geographic areas usually encompassed by plans;
- a long-term perspective (beyond the typical three- to five-year political term) is stressed;
- key elements of environmental assessment processes are incorporated, including examination of alternatives and prediction of effects;
- planning is undertaken by all the key stakeholders working together.

Such an approach could be used at any scale: for example, in regard to a special region such as the Oak Ridges Moraine, in a remedial action plan (RAP) for an area of concern on the Great Lakes, a watershed, a regional municipality, a local municipality, or an urban district. It should be viewed as a generic guide, to be adapted to the needs of each task, rather than as a recipe to be followed step by step.

A Framework

The basic elements of the suggested framework for ecosystem-based planning are:

- defining the scope of a plan: the need for it, the geographic area to which it refers, who should be involved in the plan, the time it will take to complete, and the key issues to be addressed;
- defining goals;
- defining the roles and responsibilities of participants;
- assessing ecosystem health, limits, and values;
- designing and assessing alternative scenarios;
- reaching fair and useful decisions;
- deciding how those decisions will be implemented;
- monitoring implementation;
- ensuring that projects comply with plans;
- evaluating and revising the plans.

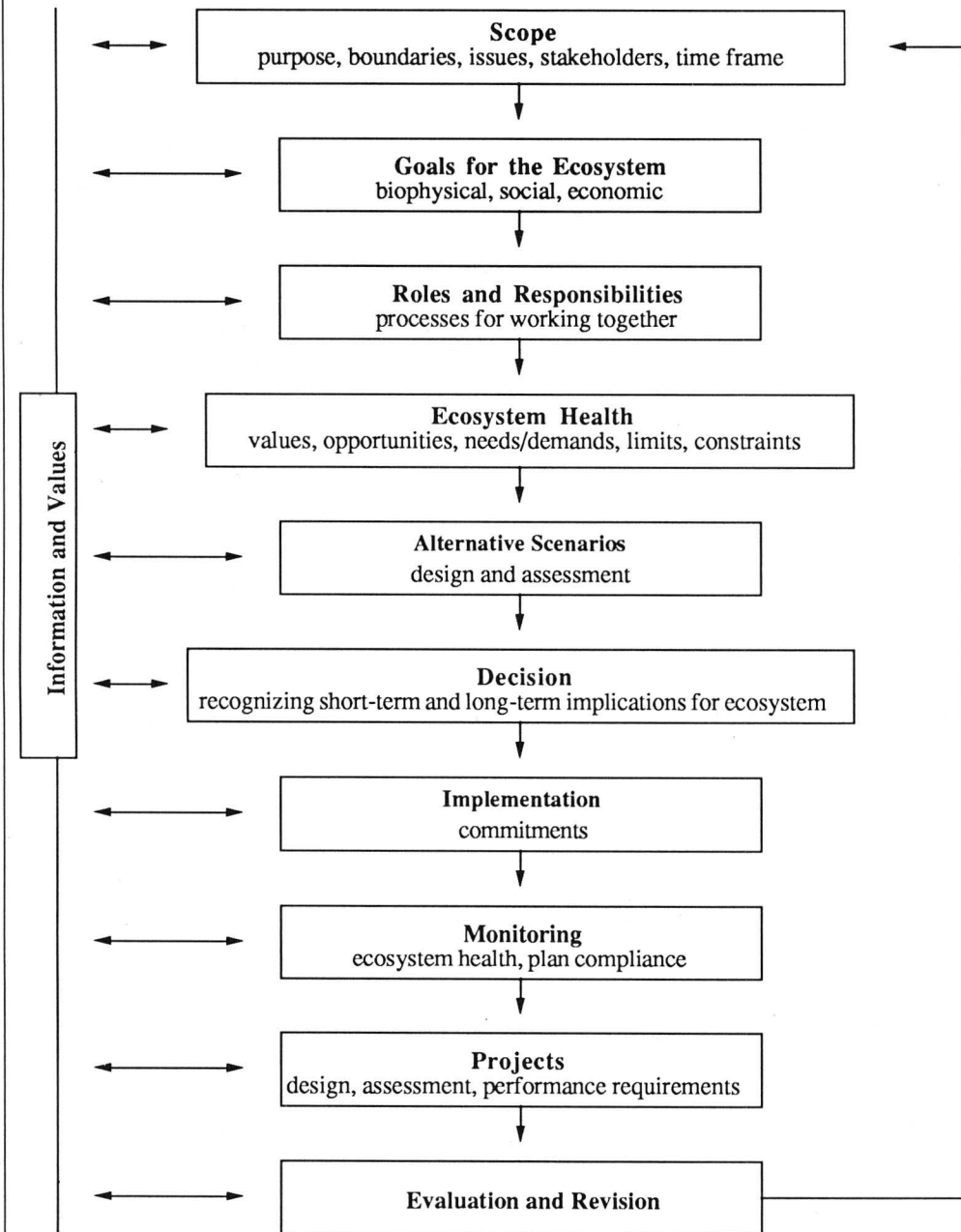
While it is necessary, for purposes of description, to present these elements sequentially, they should be seen as part of an iterative process, in which information from each step may be used to modify previous ones (see Box A1).

Defining the Plan's Scope

The first element must be that of defining the scope of the plan. That means, first, establishing the need for the plan and then defining its boundaries. The latter process may mean identifying different boundaries for various aspects of the ecosystem and for more detailed or general levels of information.

All the stakeholders — those who will participate in the plan — should be identified and involved in defining the scope of the plan. They may include different government departments or agencies at different levels, politicians, the private sector (developers, business, industry, etc.), public interest or community groups, interested individuals, and academics.

A Framework for Ecosystem-based Planning



Defining Goals

Although the overall goal of ecosystem-based planning is, of course, a healthy ecosystem, interpreting what this is and the best means of achieving it varies in different communities. In order to focus the planning process and enable people to evaluate all scenarios, each community should establish its own specific goals. The goals should define needs to be met and problems to be solved and could be developed using concepts such as healthy cities (see Box A2) and environmentally sustainable economic development; as well as existing policies, goals, and objectives, such as provincial policy statements or the Metro Toronto Remedial Action Plan (see Box A3).

The concept of sustainability requires that the goals be based on the community's long-term interests, its economy, and the environment that supports them. They should, therefore, take into account such human concerns as a diverse economy, safe environment, and opportunities for a variety of activities (recreation, work, etc.), while also serving biocentric needs for a diverse, high-quality, interconnected habitat for wildlife. The plan could define these as valued characteristics of the ecosystem to be maintained, restored or developed. Where possible, targets and indicators should be identified so that the current and future health of the ecosystem can be measured.

Defining Roles and Responsibilities

Defining the roles and responsibilities of participants in the planning process will naturally follow the identification of stakeholders and will be refined as the goals are established. A number of questions must be addressed:

- How will information be managed and by whom?
- How will the participants work together?
- Who will make decisions?
- How will decisions be made?
- How will the planning process be funded?
- Who will be accountable for implementing the plan?

Later, roles and responsibilities must be further considered in the context of implementation and monitoring.

A fundamental need in ecosystem-based planning is to ensure that all key stakeholders are fully involved from the beginning, in

The Qualities of a Healthy City

- City should provide:
 - a clean, safe physical environment of high quality (including housing quality);
 - an ecosystem that is stable now and sustainable in the long term;
 - a strong, mutually supportive, and non-exploitive community;
 - a high degree of participation and control by the public over the decisions affecting their lives, health, and well being;
 - the meeting of basic needs (for food, water, shelter, income, safety, and work) for all the city's people;
 - access to a wide variety of experiences and resources, with the chance for a wide variety of contact, interaction, and communication;
 - a diverse, vital, and innovative city economy;
 - the encouragement of connectedness with the past, with the cultural and biological heritage of city dwellers and with other groups and individuals;
 - a form that is compatible with and enhances the preceding characteristics;
 - an optimum level of appropriate public health and sick care services accessible to all; and
 - high health status (high levels of positive health and low levels of disease).

THE HEALTHY CITY PROJECT

Box A2

Metro Toronto Remedial Action Plan Goals



Goal 1: Toronto's waterfront and watersheds should be a diverse, healthy, integrated ecosystem. They should be managed using an ecosystem approach in order to restore beneficial uses of our aquatic resources. An ecosystem approach is a comprehensive and systematic consideration of the interacting components of air, land, water and living organisms, including humans.

Goal 2: Toronto's watersheds and nearshore zone should provide citizens with fishable, swimmable, drinkable and aesthetically pleasing water and aquatic habitats.

Goal 2a: Any fish species indigenous to the Toronto waterfront and its watersheds should be able to return to the region, to live and naturally reproduce there.

Goal 2b: Opportunities to sustain and create fish and wildlife habitat throughout the Toronto watershed should be pursued in parallel with water quality initiatives.

Goal 2c: Within the waterfront, watershed and headwaters, protection of the remaining wetlands should be a primary concern. A priority for any development or remedial measure should be, where possible, to avoid effects on existing wetlands, and where possible to provide increases in wetland habitats.

Goal 2d: People should be able to consume fish from the Toronto waterfront and its watersheds without any restrictions resulting from contaminants of human origin.

Goal 2e: People should be able to swim and engage in water sports in Lake Ontario and Toronto's watersheds without risk of disease or illness.

- Goal 2f:** Levels of potentially toxic chemicals in Toronto's drinking water should not exceed acceptable standards as determined by the best scientific methodology available and when no health standards have been established, should not be detectable by the best scientific methodology available.
- Goal 2g:** The aesthetic quality of the waterfront, river valleys, ravines, wetlands and waterbodies should be of sufficient quality to enhance passive and active recreational uses for all people.
- Goal 2h:** Opportunities should be provided for residents and visitors to study or observe a functioning, healthy ecosystem.
- Goal 2i:** People should be able to swim and engage in water sports in Lake Ontario and Toronto's watersheds without encountering dangerous or hazardous materials.
- Goal 3:** Discharges to Toronto's waterfront and watersheds should not contain harmful micro organisms or hazardous chemicals at levels which impair beneficial uses, inhibit indigenous biota or produce other adverse impacts on the ecosystem.
- Goal 3a:** The quality of stormwater discharged to receiving waters should be of sufficient quality so that it does not impair beneficial uses, inhibit indigenous biota or produce other adverse impacts on the ecosystem.
- Goal 3b:** The discharge of combined sewage to receiving waters should be virtually eliminated and any remaining discharge should be of sufficient quality so that it does not impair beneficial uses, inhibit indigenous biota or produce other adverse impacts on the ecosystem.
- Goal 3c:** The quality of effluent discharged to receiving waters from sewage treatment plants should be of sufficient quality so that it does not impair beneficial uses, inhibit indigenous biota or produce other adverse impacts on the ecosystem.
- Goal 4:** The costs associated with environmental controls and rehabilitation should be the responsibility of those who are the source of pollution. It is explicitly recognized in the Metro Toronto RAP area that much of the pollution is caused by individuals and the public, including industry and agriculture.

- Goal 4a:** Cost effectiveness analysis should be used in RAP development and implementation to prioritize resources for water quality improvement.
- Goal 5:** The public should have sufficient access to Toronto's waterfront and valley systems in order to make them a focus of public involvement, recreation, enjoyment and cultural activities.
- Goal 6:** The volume of in-place and transported sediments being deposited in Toronto's watersheds should be stabilized at near natural levels by controlling their release at the point of origin. These sediments should be free of persistent contaminants, and contain safe levels of non-persistent contaminants.
- Goal 7:** Lakefilling should not be permitted unless it can be demonstrated not to impair beneficial uses of aquatic ecosystems. All possible means of improving the environment as a result of each project should be explored as part of the planning process in any development.
- Goal 8:** The atmospheric deposition of potentially hazardous substances resulting from human activities in the Toronto area should have no adverse impacts on the ecosystem.
- Goal 9:** Opportunities should be created and resources identified for the Metro Toronto RAP, in the spirit of cooperation, to have input to plans in other areas, such as the Niagara River or the setting of lake water levels, which have significant impact on Toronto's water quality.
- Goal 10:** Navigation and recreational uses in the Toronto waterfront should be maintained. An ongoing dredging option should be available so long as it is carried out in an environmentally acceptable manner.
- Goal 11:** Public awareness activities and consultation should continue throughout the RAP implementation phase.
- Goal 12:** There should be a mechanism for regular review of the goals and the implementation of the remedial action plan.

Box A3

a process that facilitates co-operation, conflict resolution, and consensus-building. This should result in more timely and efficient decision-making with fewer antagonistic procedures than those that often occur today.

Assessing Ecosystem Health, Limits, and Values

Good decisions require good information. First, all the existing relevant information on the social, economic, and biophysical aspects of the area should be gathered. Information gathering should be carefully directed to address the identified needs of the planning process and avoid "analysis paralysis".

Information should then be synthesized to explore relationships within the ecosystem, and between the area and its surroundings. From the synthesis, key information gaps will become apparent. Some of these may be filled by conducting new research or modifying existing research programs. In other cases, the uncertainties associated with missing information must simply be recognized and taken into account in the planning process. The health of the ecosystem should be assessed, based on a set of criteria derived from the goals. Examples of such criteria include quality and quantity of wildlife habitat; levels of toxic chemicals in the air, water, and soils; connections with natural and cultural heritage; availability of jobs, housing, and recreation opportunities, etc. This should lead to an understanding of:

- constraints and opportunities presented by characteristics of the ecosystem;
- values to be maintained or enhanced;
- issues/problems to be addressed;
- needs/demands for services and facilities; and
- carrying capacity, or limits to the ecosystem's ability to absorb further interventions of various kinds.

Designing and Assessing Alternative Scenarios

It is necessary to develop and evaluate several alternative scenarios for the future. In some cases, existing proposals for development and resource use may provide one scenario. Others may be suggested by participants in the planning process, based on their ecosystem goals. Conflicting viewpoints among participants may be defined and then compared according to an assess-

ment of their consequences.

The probable cumulative effects of the alternative scenarios — on social, economic, and biophysical conditions of the ecosystem — should be predicted and assessed in relation to the criteria used to evaluate ecosystem health. This will identify the extent to which each scenario meets the specific goals and targets of the plan, and the remaining effects on the ecosystem. Measures to prevent or mitigate unacceptable consequences on the social, economic or biophysical environment can be identified.

Reaching Fair and Useful Decisions

Deciding which scenario to adopt and how to implement it usually lies with an elected body, such as the provincial Cabinet, or a regional or local municipal council, with an appeal mechanism available (e.g., the Ontario Municipal Board or the Environmental Assessment Board). The planning group should present the plan to the decision-making body in a way that makes the process explicit, clearly identifies the likely effects of the alternative scenarios, acknowledges uncertainties, and recognizes any residual conflicts. In arriving at a decision, it will undoubtedly be necessary to make trade-offs among different goals, but at least the planning process should have provided a clear understanding of the expected short- and long-term consequences of alternative courses of action, as well as opportunities for taking community values into account.

Implementing Plans

Many good plans sit on a shelf because all the key stakeholders were not involved and/or because the plans were not the result of a process that committed participants to implementing them. Possible implementation mechanisms will vary depending on the context of the plan, and the specific actions to be taken. A key element will be to identify who will do what, and who will pay, perhaps through such arrangements as partnership agreements and cost-sharing programs.

In the case of a plan for a special region (e.g., Oak Ridges Moraine) or a watershed, policies and recommendations should be incorporated into the official plans of the regional and local municipalities affected. Such tools as zoning, site plan control, and development approvals can then be used to implement the municipal plans. In addition, programs to improve infrastructure (sewage treatment, storm drains, roads, bridges, etc.) in order to serve new demands and to rehabilitate the ecosystem, should be developed.

Monitoring Implementation

Monitoring programs should be established as early as possible, preferably before the plan is implemented, so that baseline conditions can be established. Monitoring should be designed to:

- assess changes in ecosystem health;
- evaluate compliance with the plan's goals and performance requirements; and
- provide information that will assist people to make decisions about individual projects.

The results of monitoring programs should be made publicly available on a regular basis so that implementation of the plan and specific projects can be adjusted as needed.

Ensuring that Projects Comply with Plans

A plan will include individual projects to be undertaken. For example, it may identify areas for residential development, a new sewage treatment plant, a waste disposal site, stream rehabilitation, new parkland, etc. These projects must now be designed and assessed to ensure that they meet the goals of the plan, that their effects are understood, and that they are carried out in the best possible way to protect and enhance the ecosystem.

To assist in this process of design and assessment, each plan should provide performance requirements to describe how individual projects are expected to comply with the plan. They could include requirements for greenlands, energy and water conservation, storm water management, recycling, health and social facilities, control of emissions to air and water, etc. Ideally, the performance requirements should be based on standards developed by the provincial government, adapted or strengthened to meet specific local needs where appropriate. If necessary and considered acceptable by the community, measures should be taken to mitigate harmful effects on the ecosystem that cannot be prevented.

Projects will also be proposed that were not envisaged in the planning process. These should be assessed, in the context of the existing plan, to find out how they would affect the ecosystem. For example, would a given project help to meet community goals? What alternatives are there to the proposed project? Would it exceed the carrying capacity of some part of the ecosystem, result in unacceptable environmental damage or contribute to ecosystem rehabilitation? What is the best way of undertaking the project to meet community goals and protect/enhance the

biophysical environment?

Some information that will help in addressing these questions will be available from the planning process for the area. Additional site- or project-specific information should be provided by the proponent. As in the plan preparation process, there should be opportunities for timely and meaningful public involvement in the project assessment process.

Evaluating and Revising the Plan

Although periodic review and revision of official plans is accepted practice, environmental assessments are rarely revisited. In an ecosystem-based approach to planning, there should be a pre-determined schedule for evaluating the implementation of the plan and individual projects (based on the monitoring programs) and reviewing community goals. In effect, all the elements of the planning process should be examined to assess progress and to determine whether, because of changes in community needs, economic conditions or the biophysical environment, the plan itself should be modified.

APPENDIX B

COMMISSION REPORTS, WORKING PAPERS, AND TECHNICAL PAPERS

Commission Reports, Working Papers, and Technical Papers

Reports and working papers published by the Royal Commission on the Future of the Toronto Waterfront are available in both English and French. Publications may be obtained by contacting Irene Rota, publications co-ordinator, at the Royal Commission on the Future of the Toronto Waterfront, 207 Queen's Quay West, 5th Floor, P.O. Box 4111, Station A, Toronto, Ontario M5W 2V4.

Reports

1. *Environment and Health: Issues on the Toronto Waterfront.* Royal Commission on the Future of the Toronto Waterfront. Environment and Health Work Group. ISBN 0-662-16539-2. DSS cat. no. Z1-1988/1-41-1E
2. *Housing and Neighbourhoods: The Liveable Waterfront.* Royal Commission on the Future of the Toronto Waterfront. Housing and Neighbourhoods Work Group. ISBN 0-662-16936-0. DSS cat. no. Z1-1988/1-41-2E
3. *Access and Movement.* Royal Commission on the Future of the Toronto Waterfront. Access and Movement Work Group. ISBN 0-662-16937-9. DSS cat. no. Z1-1988/1-41-3E
4. *Parks, Pleasures, and Public Amenities.* Royal Commission on the Future of the Toronto Waterfront. Parks, Pleasures, and Public Amenities Work Group. ISBN 0-662-16936-0. DSS cat. no. Z1-1988/1-41-4E
5. *Jobs, Opportunities and Economic Growth.* Royal Commission on the Future of the Toronto Waterfront. Jobs, Opportunities and Economic Growth Work Group. ISBN 0-662-16939-5. DSS cat. no. Z1-1988/1-41-5E
6. *Persistence and Change: Waterfront Issues and the Board of Toronto Harbour Commissioners.* Royal Commission on the Future of the Toronto Waterfront. Steering Committee on Matters Relating to the Board of Toronto Harbour Commissioners. ISBN 0-662-16966-2. DSS cat. no. Z1-1988/1-41-6E

7. *The Future of the Toronto Island Airport: The Issues*. Royal Commission on the Future of the Toronto Waterfront. ISBN 0-662-17067-9. DSS cat. no. Z1-1988/1-41-7E
 8. *A Green Strategy for the Greater Toronto Waterfront: Background and Issues: A Discussion Paper*. Royal Commission on the Future of the Toronto Waterfront. ISBN 0-662-17671-5. DSS cat no. Z1-1988/1-41-8E
 9. *Waterfront Transportation in the Context of Regional Transportation: Background and Issues*. Royal Commission on the Future of the Toronto Waterfront. ISBN 0-662-17730-4. DSS cat. no. Z1-1988/1-52-2E
 10. *Environment in Transition: A Report on Phase I of an Environmental Audit of Toronto's East Bayfront and Port Industrial Area*. Royal Commission on the Future of the Toronto Waterfront. ISBN 0-662-17847-5. DSS cat. no. Z1-1988/1-52-3E
 11. *East Bayfront and Port Industrial Area: Pathways: Towards an Ecosystem Approach*. Royal Commission on the Future of the Toronto Waterfront. ISBN 0-662-18577-3. DSS cat. no. Z1-1988/1-41-11E
 12. *Planning for Sustainability: Towards Integrating Environmental Protection into Land-Use Planning*. ISBN 0-662-18929-9. DSS cat. no. Z1-1988/1-41-12E
- Interim Report, August 1989*. Royal Commission on the Future of the Toronto Waterfront. ISBN 0-662-17215-9. DSS cat. no. Z1-1988/1E
- Watershed: Interim Report, August 1990*. Royal Commission on the Future of the Toronto Waterfront. ISBN 0-662-18012-7. DSS cat no. Z1-1988/1-62-1990E

Working Papers

A Selected Bibliography on Toronto's Port and Waterfront

ISBN 0-662-17596-4

DSS cat. no. Z1-1988/1-42-1E

An Index to the First Interim Report

ISBN 0-662-17597-2

DSS cat. no. Z1-1988/1-42-2E

Urban Waterfront Industry: Planning and Developing Green Enterprise for the 21st Century; a Report of the Symposium, November 16, 1989

ISBN 0-662-17640-5

DSS cat. no. Z1-1988/1-52-1E

Soil Contamination and Port Redevelopment in Toronto

ISBN 0-662-17729-0

DSS cat. no. Z1-1988/1-42-3E

The Toronto Harbour Plan of 1912: Manufacturing Goals and Economic Realities

ISBN 0-662-18005-4

DSS cat. no. Z1-1988/1-42-4E

Toronto's Moveable Shoreline

ISBN 0-662-18160-3

DSS cat. no. Z1-1988/1-42-5E

Toronto: The State of the Regional Economy

ISBN 0-662-18888-8

DSS cat. no. Z1-1988/1-42-6E

The Disposal of Coal Ash at Toronto's Outer Harbour

ISBN 0-662-18902-7

DSS cat. no. Z1-1988/1-42-7E

Technical Papers for the Environmental Audit of the East Bayfront/Port Industrial Area

Phase I

1. *Atmospheric Environment*
2. *Built Heritage*
3. *Natural Heritage*
4. *Soils and Groundwater Report and Appendix*
5. *Aquatic Environment*

Phase II

6. *Atmospheric Environment*
7. *Built Heritage*
8. *Ecosystem Health: A Biophysical Perspective*
9. *Hazardous Materials*
10. *Natural Heritage*
11. *Soils and Groundwater*
12. *Water and Sediments*

APPENDIX C

MAP CREDITS

Map Credits

Map 1: Greater Toronto Bioregion:
18K Design Communications, Toronto, Ontario

Map 2: Active Development Applications in the City of Vaughan:
18K Design Communications, Toronto, Ontario

