

**CUMULATIVE ENVIRONMENTAL EFFECTS AND
SCREENING UNDER THE CANADIAN
ENVIRONMENTAL ASSESSMENT ACT**

**WORKSHOP PROCEEDINGS
NATIONAL CAPITAL COMMISSION**

Prepared For:

**The Federal Environmental Assessment Review Office and
The Environmental Assessment Branch, Environment Canada**

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1. INTRODUCTION

The Canadian Environmental Assessment Act received Royal Assent on June 23, 1992, and will be proclaimed in early 1993. Amongst other things, the Act requires that:

“Every screening or comprehensive study of a project and every mediation or assessment by a review panel shall include a consideration of the following factors:

*(a) the environmental effects of the **project...and** any cumulative environmental effects that are **likely** to result from the project in combination with **other projects** or activities that have been or will be carried out;*

*(b) the **significance** of the effects **referred** to in paragraph (a); ”*
(section 16(1)).

The Federal Environmental Assessment Review Office (FEARO) is currently preparing a Procedural Manual which provides guidance on how to conduct environmental assessments under the Act, including the assessment of cumulative environmental effects. As well, a more detailed Reference Guide on addressing cumulative environmental effects has been drafted as a supporting document to the Manual. However, FEARO recognises that approaches and methods for assessing cumulative environmental effects are evolving rapidly and that any guidance offered should reflect best current practice.

To complement its work to date and to provide the best practical advice possible FEARO, in cooperation with other federal departments and agencies, is examining how cumulative environmental effects can be considered in screenings of projects during federal environmental assessments. The departments and agencies that are participating in this initiative are:

- Environment Canada
- Transport Canada;

- The National Capital Commission (NCC);
- The Canadian International Development Agency (CIDA);
- The Department of Indian Affairs and Northern Development;
- Fisheries and Oceans;
- Energy, Mines and Resources; and
- Agriculture Canada.

The workshops focus on the assessment of cumulative environmental effects at the screening level of the environmental assessment process. Screening is the most routine of the four tracks of the environmental assessment process (the others are comprehensive study, mediation and panel review) and is required for most smaller projects or projects that are thought to be less likely to cause any significant adverse environmental effects. Class screening, in which the environmental effects of a class of projects is assessed, is part of the screening track. The vast majority of federal environmental assessments (more than 95%) are conducted at this level. Also, smaller projects that are subject to screening can be important contributors to cumulative environmental effects. In addition, there are special issues associated with addressing the cumulative environmental effects of small projects as opposed to larger ones.

Each participating department or agency selected several case studies of projects that have been subjected to screening under the Environmental Assessment and Review (EARP) Guidelines Order (1984). For each case study, brief written background materials are prepared (see Section 2). The case studies are then presented at a series of 1-2 day workshops with staff from the department or agency involved. The case studies are used as a basis for discussing how the cumulative environmental effects of projects could be addressed in screening.

There is at least one workshop being held by each participating department or agency. Two departments (i.e., Environment Canada and the Department of Fisheries and Oceans) will hold several workshops in different regions of the country. The Schedule of Workshops is shown in Appendix A.

The National Capital Commission (NCC) was the second department or agency to hold a workshop. The NCC has a well-developed environmental assessment program and has played a leadership role in apply the principles of environmental assessment to land use plans, such as the Gatineau Park Master Plan. The NCC is a Crown Corporation and therefore is not automatically required to comply with the new Act, until regulations for Crown Corporations have been developed. However, it is likely that NCC's environmental assessment activities will be fully consistent with the intentions of the new Act. As well, NCC is currently examining its status with regard to the new Act.

This draft report summarises the results of the NCC workshop. It is intended to summarise the discussions, rather than to provide detailed minutes. The agenda and list of participants is shown in Appendix B. As well as the draft report, a set of 'consolidated proceedings' will be prepared. Where possible, these 'consolidated proceedings' will be sent to the participants of each workshop in advance, so that they are aware of the discussions at all previous workshops.

At the conclusion of this initiative, the final 'consolidated proceedings' will be distributed to all participants from all workshops. As well, a final interdepartmental workshop is planned for March 1993 to discuss common themes in addressing cumulative environmental effects in screenings, as well as inter-departmental collaboration and co-operation on this subject. Subsequently, **FEARO's** Procedural Manual and Reference Guide will be revised, if necessary, to take account of the outcome of this initiative.

2. **CASE STUDIES**

Each department or agency participating in this initiative was asked to select several recent examples of projects previously subjected to screening under the EARP Guidelines Order (1984).

In most cases, these examples represented the range of different types of projects screened by the department or agency, as well as different-sized projects and projects in different types of ecosystems.

For each case study, brief written background materials were prepared summarising:

- The project;
- The project's environmental effects;
- The screening decision reached; and
- How, and to what extent could any cumulative environmental effects be addressed.

To assist in the preparation of the background materials and to familiarise the workshop participants with addressing cumulative environmental effects in environmental assessments, copies of a background paper on cumulative environmental effects and the draft Reference Guide prepared by FEARO were distributed to all workshop participants in advance.

The following case studies were presented at the NCC workshop:

- Mud Lake Stormwater Outlet Location - **Britannia/Pinecrest** Area;
- Ravin Bleue;
- Lynda Lane Lands;
- Major's Hill Park;
- Hunt Club Extension;
- Mountain Bikes in Gatineau Park; and
- Greenbelt Master Plan.

The background material prepared by National Capital Commission are contained in Appendix C in the language in which they were submitted. Some of the main issues discussed are outlined below.

Mud Lake Stormwater Outlet Location - Britannia/Pinecrest Area

Stormwater management is a very common problem in urban areas, yet it is rarely addressed from a cumulative perspective. This case study raised such issues as:

- The need for municipalities to consider the cumulative environmental effects of stormwater drainage;
- What is the 'threshold' of the receiving environment for stormwater?
- What are the most appropriate mitigation measures?
- What is the significance of the combined environmental effects?
- Who should pay to install appropriate stormwater management facilities, the developer, the municipality or the NCC?
- The need for better standards and guidelines for stormwater management.

Ravine u e

The Ravin Bleue case study focussed on the cumulative environmental effects of development on slope stability in an adjacent ravine. Clearly, the residential development had been built without considering the cumulative effects. After the slope had collapsed, the key questions are what should be done and who should pay. The slope was on NCC lands and NCC has a policy to protect heritage. The municipalities, whose planning processes permitted the development that caused the problem, -have no such policy. As well, NCC is not always informed about proposed developments on the Quebec side of the river.

Thus, there were three main problems associated with slope collapse at Ravin Bleue:

- There was no assessment of the environmental effects of the development (i.e., geophysical studies);
- There were no boundaries set for the development; and
- There were jurisdictional issues about who should pay to resolve the situation.

Lynda Lane Lands

This case study discussed the cumulative environmental effects of land transactions. The current Treasury Board policy is to encourage the divestiture of surplus lands at current market value, based on highest and best use. For NCC lands, the highest and best use often means residential development. Since NCC wants to maximise its revenue from land sales, this policy is not always consistent with environmental protection and enhancement, and often results in habitat fragmentation. Furthermore, revenue from land sales is used to purchase lands deemed necessary to implement NCC's mandate for heritage. Thus, some NCC-owned urban greenspace is being sold in order to buy more land in Mer Bleue and Stony Swamp. Indeed, all purchases of natural resource lands (e.g., Mer Bleue, Stony Swamp) are financed through revenue generated through land sales. Land is sold according to set priorities, when it is not deemed useful to NCC's mandate. This assumes that 'natural resource areas' are more important to NCC than urban greenspace. Is this a valid assumption? There **was** a lively discussion among the workshop participants on this point.

As well, the more conditions NCC imposes on the future development of a site, the more its value falls. Thus, some developers (including municipalities) like development restrictions.

An underlying problem is that neither the Federal Land Use Plan (FLUP) or the National Interest Land Mass Program have been subjected to an environmental assessment. This would help resolve the issues associated with the cumulative environmental effects of land transactions. It should be noted, however, that an environmental assessment of the FLUP is now being initiated.

Another issue discussed was the need for additional tools to assess the cumulative environmental effects of land transactions in general, and road construction in particular. Increasing road capacity should not be seen as a mitigation measure for overcrowded roads, but rather as one of several alternatives.

Major's Hill Park

The Major's Hill Park case study examined the cumulative environmental effects of multiple activities in one park. The issues raised in this case study focussed on two questions:

- How much stress from human activities can the trees and other vegetation in the Park withstand, given that many of the trees in the park have already died; and
- Who is responsible for assessing the cumulative environmental effects of the activities (Canada Day and the **Franco-ontarian** Festival), the organisers, the land owners (Department of Public Works) or the land managers (NCC)?

Hunt Club Extension

The Hunt Club Extension case study raised several interesting issues, including:

- There are gaps in the baseline environmental information;
- It is difficult to determine the minimal conditions under which the Agricultural Centre could operate;
- It is difficult to assess the cumulative environmental effects of multiple developments (including the Hunt Club Extension) on the resident's quality of life;
- It is very difficult to determine the scope of the project to be assessed, at the planning stage;
- Mitigation measures should include social changes (e.g., encouraging car pooling, working at home, introducing flexible working hours), as well as (or instead of) design changes.

Mountain Bikes in Gatineau Park

Mountain bikes are relatively new in Gatineau Park but they are causing cumulative environmental effects including:

- . Soil compaction;
- . Erosion and drainage problems;
- . Exposing tree roots; and
- . Disturbance of wildlife.

However, it is very difficult to determine the cumulative environmental effects of mountain bikes because of the shortage of environmental data, information and knowledge. The need for ongoing monitoring was emphasised.

Greenbelt Master Plan

A new Greenbelt Master Plan is being prepared by the NCC. Major issues being dealt with in the new Plan include:

- . Road construction and widening;
- . Habitat loss and/or fragmentation;
- . The need for links between different **areas** of the Greenbelt;
- . The viability of agriculture in the Greenbelt;
- . Lack of maintenance and upgrading of facilities leased out by the NCC; and
- . Public accessibility.

The new Plan will undergo an environmental assessment, which will include an assessment of the cumulative environmental effects. Indeed, the environmental assessment process is being fully integrated into the planning process for the new Plan. An issues scoping exercise has

already been completed and environmental planning objectives and indicators have been developed.

Issues related to cumulative environmental effect include:

- Setting temporal and spatial boundaries for the Plan and the environmental assessment;
- Resolving jurisdictional issues; and
- Assessing the environmental effects of other relevant plan and projects.

A method for the environmental assessment of the Greenbelt Master Plan is currently being developed.

3. ISSUES ASSOCIATED WITH ADDRESSING CUMULATIVE ENVIRONMENTAL EFFECTS

During the discussions following each case study, many issues associated with addressing cumulative environmental effects were raised. These issues were summarised at the end of the first day. They can be divided into three categories:

- Institutional, jurisdictional and political;
- Data, information and methods; and
- Environmental assessment procedures.

Several of the issues mentioned cut across these categories. For example, better consultation between government departments and agencies would improve information sharing among them.

3.1 INSTITUTIONAL, JURISDICTIONAL AND POLITICAL

The workshop participants identified the following institutional, jurisdictional and political issues associated with addressing cumulative environmental effects in environmental assessments including:

- The large number of departments and agencies at the local, regional, provincial and federal levels of government that have roles or responsibilities for projects conducted on land within the National Capital Region (NCR);
- The differing or even competing policies and/or objectives for land use of these departments;
- Unclear roles and responsibilities of the various government departments and agencies, in some cases;
- Insufficient consultation between government departments and agencies on matters related to land use in the NCR; and
- The need for harmonisation of environmental assessment processes and procedures among the municipal, provincial and federal levels of government, and/or among different federal departments and agencies.

There were institutional, jurisdictional and political issues inherent in all of the case studies. These were most evident in the case studies involving ‘linear’ projects or activities (e.g., Hunt Club extension, **Pinecrest/Britannia** Beach stormwater drainage), large areas of land (e.g., the Greenbelt Master Plan) or the ownership, use and management of land by different government departments or agencies (e.g., Major Hill Park, Ravin Bleue).

3.2 DATA, INFORMATION AND METHODS

The workshop participants discussed several issues relating to the need for data, information and methods to address cumulative environmental effects-in environmental assessment, including:

- Lack or shortage of baseline environmental data and information;
- Lack of accessibility/awareness to existing data and information;
- Poor information sharing among government departments and agencies at all levels of government;
- Inadequate analysis or synthesis of environmental data;

- Loss of corporate memory within government departments and agencies, due to reorganisations and high turnover rates. This is important in relation to identifying past and present projects and activities that may interact with the environmental effects of the project in question;
- No consensus about appropriate environmental indicators to use to monitor different types of cumulative environmental effects;
- Difficulty in determining ‘thresholds’ for cumulative environmental effects; and
- Lack of adequate methods to address cumulative environmental effects in environmental assessments, especially those on the quality of life.

3.3 ENVIRONMENTAL ASSESSMENT PROCEDURES

The workshop participants discussed many issues that relate to environmental assessment procedures including:

- Project level environmental assessments are not well-suited to address cumulative environmental effects. To assess and manage cumulative environmental effects well at the project level , it will be necessary to assess the environmental effects of policies, programs and plans;
- Even where there are policy, program plan and project level environmental assessments, the linkages between them are often not well-established and the assessments are not conducted in a rational order that would facilitate a good assessment of the cumulative environmental effects;
- How should the appropriate level of effort and degree of analysis associated with addressing cumulative environmental effects be determined?
- Few municipal land use plans or policies have been subjected to an environmental assessment. Thus, their environmental effects have not been considered;
- It is difficult to set temporal and spatial boundaries for cumulative environmental effects;
- It is difficult to establish appropriate mitigation measures for cumulative environmental effects, when the project in question may only be responsible for a proportion of a cumulative environmental effect;

- How should the significance of the cumulative environmental effects caused by the project in question be determined?
- There is no ‘quality control’ or audit of federal environmental assessments to determine if the cumulative environmental effects of the project in question have been addressed adequately.

4. FUTURE DIRECTIONS

On the second day of the workshop, the participants discussed the strategies, approaches, and methods that could be used to improve the way that cumulative environmental effects are addressed in environmental assessments. The ideas that were discussed can be divided into two categories:

- General strategies, approaches, and methods; and
- Strategies, approaches, and methods for the NCC.

4.1 GENERAL STRATEGIES, APPROACHES, AND METHODS

The general strategies, approaches, and methods that were discussed are applicable to most federal departments and agencies with environmental assessment programs. In many cases, they relate directly to the issues outlined in Section 3 of this report.

- Establish ‘roundtables’ or committees with representatives of the different government departments and agencies, at the different levels of government, with a role or responsibility to resolve issues related to the cumulative environmental effects associated with specific projects. Such **multi-jurisdictional** roundtables or committees would be helpful in scoping the issues, setting boundaries, data and information sharing and synthesis, deciding on appropriate mitigation and monitoring, as well as resolving cost-sharing issues. In some cases, ‘independent experts’ could be included. This approach to assessing and managing cumulative environmental effects is similar to the informal ‘mediation’ processes (“small ‘m’ mediation”) that have been proposed for scoping issues for an environmental assessment.

- Encourage the harmonisation of environmental assessment processes and environmental planning between the municipal, provincial and federal levels of government, as well as between different federal departments and agencies. This could be done through Memoranda of Understanding, like the current federal/provincial harmonisation initiative. For example, a harmonisation exercise has already been initiated with the Regional Municipality of Ottawa-Carleton.
- Ensure that plans, programs, policies and projects are subject to an environmental assessment process, in which cumulative environmental effects are addressed. Ideally, all municipal land use plans should undergo an environmental assessment.
- Include a statement in leases and other agreements (e.g., easement agreements) that the Parties must comply with the new Canadian Environmental Assessment Act.
- Provide education materials on cumulative environmental effects in university courses on environmental assessment, as well as in environmental assessment training programs.
- Promote the use of ‘corporate memory’ about projects and activities (either past or present) that could interact with the project being assessed, to cause cumulative environmental effects.
- Ensure that public registries developed to comply with the requirements of the new Act are keyworded, or can be sorted by issue, as well as by location and type of project.
- Coordinate environmental assessment **training** activities within the federal government.
- Explore the applications of GIS for assessing cumulative environmental effects.
- Establish an inter-departmental committee or network on environmental assessment at the working or operational level to improve inter-departmental collaboration and communication, to complement the Senior Management Committee on Environmental Assessment.
- Formalise scoping as part of screening. If scoping was an explicit step in screening a project, it would help to focus boundary and issue decisions related to assessing cumulative environmental effects.

- Establish community-based committees for follow-up after an environmental assessment. Such committees could evaluate the implementation and effectiveness of mitigation measures, as well as acting as a quality control mechanism.

4.2 STRATEGIES, APPROACHES, AND METHODS FOR THE NCC

The following specific strategies, approaches and methods were discussed in relation to the NCC itself.

- The NCC should initiate discussions with all municipalities in the NCR to ensure that information is circulated on the development applications and plans being considered.
- The NCC's screening checklist should include cumulative environmental effects.
- The NCC's branch Environmental Assessment Coordinators and Project Managers should be responsible for signing off environmental assessments (it should be noted that this is now being initiated).
- The roles and responsibilities of the Environmental Assessment Coordinators Committee and the Inter-branch Land Use Committee should be reviewed and modified to include cumulative environmental effects.

5. RECOMMENDATIONS TO FEARO AND ENVIRONMENT CANADA

Many of the strategies, approaches, and methods discussed in Section 4 above, can be seen as recommendations to **FEARO/Environment** Canada. However, the workshop participants also recommended several strategic roles for **FEARO/Environment** Canada that would help NCC to address cumulative environmental effects more effectively. These strategic roles can be summarised as:

- Encouraging environmental assessment research;
- Coordinating training;
- Facilitating information sharing among federal departments and agencies and

improving information management; and

- Providing advice on ‘best practice’ for environmental assessment.

Research

Several workshop participants emphasised the need for FEAR0 and Environment Canada to continue an active program in environmental assessment research, now that CEARC is no longer operational. Research on cumulative environmental effects should focus on practical approaches, methods and tools that can be used to assess cumulative environmental effects. One suggestion was to examine ‘alternatives’ to the project more carefully. For example, instead of seeing road widening as a mitigation measure for overcrowded roads, it should be treated as one of several alternatives. Another alternative would be to encourage people to use public transit.

Training

Participants were of the opinion that there is a need for FEAR0 and/or Environment Canada to coordinate environmental assessment training across the federal government.

Information Sharing

Recommendations on information sharing and information management are outlined in Section 4 of this report.

Advice on Best Practice

FEAR0 and Environment Canada should be moving beyond just providing guidance on how to comply with the new Act. It should also be providing advice on ‘best practice’ for environmental assessment. Three recommendations relating to this were:

- The need for advice on conducting ‘policy assessments’. Policy assessments are an important way of addressing cumulative environmental effects.

- The need for more specific advice on assessing cumulative environmental effects. This could be done by providing guidance on how to address cumulative environmental effects in environmental assessments of different types of projects (i.e., on a **sectoral** basis).
- The need to undertake audits of environmental assessments to determine whether or not they are making a difference in decision-making.

The workshop participants were also of the opinion that FEARO should be more active in all three areas mentioned above, as they relate to small and medium sized projects. To date, **FEARO's** operational role has focussed on the large projects addressed in panel reviews, but there is a need for FEARO to provide operational advice to federal departments and agencies dealing with the smaller projects that comprise the vast majority of federal environmental assessments. In this regard, participants stated that it is important to examine the criteria used to establish exclusion lists for projects. Projects with cumulative environmental effects should not appear on exclusion lists.

APPENDIX A
SCHEDULE OF WORKSHOPS

<u>DEPARTMENT</u>	<u>LOCATION</u>	<u>DATE</u>
Transport Canada	Ottawa	November 10
National Capital Commission	Ottawa	November 26-27
Canadian International Development Agency	Ottawa	December 8-9
Department of Fisheries and Oceans	Ottawa	January 12-13
Department of Environment/Department of Fisheries and Oceans	Halifax Vancouver	January 14-15 January 25-26 or 26-27
Department of Indian Affairs and Northern Development	Vancouver	January 28-29
Energy, Mines and Resources	Ottawa	February 4-5
Agriculture Canada	TO BE DETERMINED	

APPENDIX B
NATIONAL CAPITAL COMMISSION
WORKSHOP AGENDA AND LIST OF PARTICIPANTS

WORKSHOP AGENDA

CUMULATIVE ENVIRONMENTAL EFFECTS AND SCREENING UNDER
THE CANADIAN ENVIRONMENTAL ASSESSMENT ACT

Thursday, November 26, 1992

8:30 a.m. - 4:30 p.m

Friday, November 27, 1992

8:30 a.m. - 12 noon

Sheraton Hotel

Aylmer, Quebec

DAY 1 / PREMIERE JOURNEE

- 08:30 Welcome, review of agenda and purpose of workshops
Mot de bienvenue, revision de l'ordre du jour et du but des ateliers
- 08:40 Introductions/presentations
- 08:45 Update on **CEAA/Mise à jour** sur la LCEE
regulations/reglements
procedural **manual/manuel** de procedures
- 09:00 Cumulative environmental effects and the Act
Le effets cumulatifs et la nouvelle **loi**
- 09:10 Review of previous workshop/resume de l'atelier anterieur
- 09:20 Gestion des eaux pluviales: Mud Lake
09:35 **présenté** par Livain Michaud
- 09:35 Ravin **Bleue**
09: 50 **présenté** par Gabrielle Simonyi

09:50 10:20	Discussion
10:20 10:35	Refreshments Pause santé
10:35 10:50	Land transactions: Lynda Lane presented by Gordon Kerluke
10:50 11:05	Utilisation des vélos de montagne au Parc de la Gatineau présenté par Henriette Richard
11:05 11:30	Discussion
11:30 11:45	Prologation du Chemin Hunt Club présenté par Daniel Hamelin
11:45	Discussion
12:00	LUNCH / DEJEUNER
13:00 13:15	Parc Major présenté par Jacques Dupuis
13:15 13:30	Plan Directeur: Ceinture de Verdure présenté par Gabrielle Simonyi
13:30 14:00	Discussion
14:00 14:15	Summary of case studies Resume des études de cas
14:15 14:30	Refreshments Pause santé
14:30	Procedures and methods for assessing cumulative environmental effects during screening <ul style="list-style-type: none"> • setting boundaries • examining interactions • identifying past and future projects

Methodes et procedures pour l'évaluation des effets environnementaux cumulatifs lors de l'examen préalable

- identifier les limites de l'étude
- **étudier** les **interactions**
- identifier les **projets** passés et **à** venir

16:15 Summary of procedures and methods
Resume des **méthodes** et procedures

16:30 **Adjourn/séance** levée

DAY 2 / DEUXIEME JOURNEE

08:30 Review of Day 1
Première **journée** passée en revue (notes **écrites** distribuées aux **participant(e)s**)

09:00 NCC procedures for assessing cumulative environmental effects during screening
Procedures de la CCN pour l'évaluation des effets cumulatifs lors de l'examen préalable

10:30 Refreshments/Pause **santé**

10:45 Summary of NCC procedures/resume des procedures de LA CCN

11:00 Review of reference guide and recommendations
guides de références et recommandations passés en revue

11:30 Next **steps/prochaines étapes**

12:00 Concluding remarks/allocution de clôture ,

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APPENDIX C
NATIONAL CAPITAL COMMISSION
CASE STUDIES

1. MUD LAKE STORMWATER OUTLET LOCATION - **BRITANNIA/PINECREST AREA**

The Project:

To select an appropriate outlet location for the local storm drainage improvements in the area.

The Rationale:

Storm drainage improvement is considered necessary to relieve flooding and sewer back-up problems during spring and other storm events. Diversion of stormwater downstream from Britannia Beach will also reduce pollution level at the beach.

Environmental Assessment Responsibilities:

This is a City of Ottawa undertaking, and an Environmental Study Report (ESR) was completed in summer 1992 using the Ontario Class Environmental Assessment procedure for Municipal Sewage and Water Projects. NCC lands will be required to implement this project. This would require federal land use and design approvals as well as compliance to the EARP Guidelines Order. To this date, the City of Ottawa has not filed a formal request to the NCC. To avoid duplication, the NCC will use the provincial EA results on which to base its decision.

Methodology:

Three outlet locations were selected and evaluated through the Class EA process (Ottawa River, Mud Lake, and Pinecrest Creek), and public input was sought during each step of the process. Aquatic habitat was **characterized** at each outlet location, and models were used to calculate the volume of stormwater that will be directed to

these outlets during different storm events. However, no specific method was used to evaluate the significance of the effects identified.

Results:

The Pinecrest Creek outlet was recommended as the preferred option, mostly because there was a strong public reaction against the Mud Lake option, and because the Ottawa River option was too close to the Britannia filtration plant waste intake. Finally, the Pinecrest Creek site and aquatic habitat is of very poor quality, and no other environmental issues were evident.

Sedimentation tanks along the sewer line or a sedimentation pond at the outlet will be incorporated to the infrastructure to satisfy the MNR requirements for the protection of fish habitats.

Cumulative Environmental Effects - Issues:

For this project, the most likely cumulative environmental effect is the contribution of stormwater to the total pollution load entering Pinecrest Creek and the Ottawa River. However, what is the significance of this effect?

In this case, the ESR did not **recognize** stormwater as an important source of pollution, and did not consider its potential cumulative environmental effects. The following arguments were presented:

- No criteria exist for stormwater flow. Only the MNR has some requirements that can apply to stormwater (total suspended solids (TSS), dissolved oxygen (DO), lead, **pH**, oils) for the protection of fish habitats. The total suspended solids criterion is the most applicable. In this area, the MNR requires that TSS be less than 80 **mg/L**.
- The ESR has established that impacts of directing stormwaters at the Pinecrest Creek outlet will be negligible, because the area drained represents only 10% of the Pinecrest watershed (and substantially less when compared with the Ottawa River watershed), and because of the

poor water quality already existing in Pinecrest Creek. In addition, there are no swimming areas near the outlet.

Discussion:

It is probable that adjustment to the ESR will be required to satisfy the CEAA, because cumulative environmental effects are likely to result from this project (contribution to the total pollution load in the river), and were not considered. To resolve this, the type of cumulative effect should be identified (linear additive, slowly dissipative, synergistic relationships, etc.), and the carrying capacity or ecological thresholds of the receiving ecosystem should be understood. Contrary to the argument presented in the ESR, potential impacts here are not necessarily proportional to the pollution volume added to the system.

Finally, due to the dynamic nature of a watercourse and the multi-jurisdictional reality of a watershed, an integrated watershed planning approach will probably be the most effective tool to address cumulative pollution loading into the watercourse.

2. RAVIN BLEUE

The Project:

A slope failure along the **Leamy** Creek Ravine in Hull occurred in April 1991 on NCC land. Subsequently the failure aggravated, affecting adjacent properties (on municipal land). A consulting firm was hired by the NCC, to provide recommendations of remedial actions to best mitigate the slope failure as well as to prevent future slides in the failure area.

The Background:

Biophysical and socio-economical aspects:

The ravine is part of the Philemon Wright corridor. It creates a natural corridor for the movement of wildlife connecting Gatineau Park and the Gatineau River. It is the last remaining 'natural' creek ravine in Hull. The FLUP designates this ravine as part of the 'Natural Environment' requiring special management techniques for preservation and protection.

The ravine consists of clay soils which have a high capacity of water retention. Weathering, surface protection and other geological processes have resulted in steep slopes which are sparsely forested, predominantly with maple and ash.

Most of the area surrounding the ravine is urbanized and some buildings are close to the slopes, a cause of concern for those properties. The potential causes for slope failure were found to be related to the rapid change in the watershed, arising from the rapid transition from a natural environment to an urbanized one, resulting in changes in the hydraulic characteristics of the channel. No adequate stormwater management practices are in place. Furthermore, there are several stormwater outlets into the creek. Consequently this has caused a change in the flow regime, as well as affecting the water quality of the creek. An increased discharge in a sinuous creek such as **Leamy** creek, caused undercutting and slumping of the banks.

...

In the last 25 years numerous slope stability reports and site specific investigations have been undertaken of the study area. The area was **characterized** as an active failure zone, susceptible to slope failure at any given time and has been a source of ongoing concern.

The Environmental Assessment:

A project team was formed in order to direct the consultant's work re. the failure zone's remedial concept plan development. The project team include a representative of the EA and Planning Section. Environmental planning was a

major component of the approach. A level II environmental assessment was required for this study. The project as defined was to assess the environmental impacts resulting from the remedial measures to mitigate the slope failure.

Three alternatives were assessed:

1. Do nothing.
2. Regrading, erosion. protection and revegetation - stabilization design using a bioengineering approach.
3. Slope drains, regrading, erosion, protection and revegetation - stabilization design using rip-rap.

The positive and negative as well as cumulative impacts of the proposed alternatives were assessed. A matrix methodology was used combined with analysis.

As a result of the assessment alternative 2 was the recommended option. The decision code is: 3 (proceed with proposal because impacts may be mitigated with known technology).

The use of a bioengineering approach will result in long term benefit for the immediate area as well as the entire ravine ecosystem. The use of this method at this specific site will be a pilot project that could assist in the stabilization of other portions of this stream in a medium and long term.

On a medium-term, the development of an overall watershed management strategy combined with a monitoring and maintenance program for **Leamy** Creek ravine in cooperation with the City of Hull was highly recommended. The monitoring program would consist of identifying and mapping areas which need maintenance

or restoration/stabilization similar to the one which occurred last spring. The maintenance program should be undertaken to prevent the occurrence of major slides, especially in urbanized areas.

The Issues:

One of the main issues in this project is that the remedial action proposal is the result of impacts of other activities such as urban development, which were never assessed previously. This is a good example of jurisdictional challenges encountered when the development plans produced by the municipality do not require environmental assessments.

The other issue is how to set geographical and temporal boundaries. Again, cumulative impacts resulting from development projects, such as stormwater issues, can only be addressed by working jointly with partners (City of Hull).

Some of the cumulative impacts were addressed in this project, such as those that are directly relevant to the ravine's environment; for example, aesthetic value, aquatic habitat, recreation use, loss of adjacent properties, wildlife habitat, etc. Other potential cumulative impacts were not assessed because of the lack of establishment of project boundaries (physical and temporal), and consequently, the lack of assessment of other present and future projects in the area.

3. LAND TRANSACTIONS: LYNDA LANE

Neighbourhood Data:

The Lynda Lane lands, comprising of an area of approximately 14.17 acres, are located on the south side of Smyth Road and to the east, north and west of residential neighbourhoods. To the south is a major institutional area. Generally the neighbourhood is known as Alta Vista,

The transportation routes within the area are adequate. Smyth Road is a four lane arterial linking with St. Laurent Blvd., a major east west four lane regional road that connects East and South Ottawa and links with the Queensway. Smyth Road links with Alta Vista Drive which connects to the Queensway and the Vanier Parkway to the north. The transit way passes Smyth Road at Riverside Drive and provides rapid public bus transit to the Central Business District. There are also bus stops on Smyth Road at the lands. Currently, there are plans that would extend the Alta Vista Parkway through the subject neighbourhood. This is a controversial route and will not likely begin within the next five years. The completion of this parkway would enhance access to the neighbourhood.

The Ottawa Health Sciences Centre, a 38 acre campus, is located to the immediate north of the subject lands directly across Smyth Road. The Centre is a partnership comprised of four institutions; the Ottawa General Hospital, the University of Ottawa Faculty of Health Sciences, the Rehabilitation Centre, and the Children's Hospital of Eastern Ontario.

Immediately to the west of the Ottawa Health Services Centre is the Rideau Veterans Home, a placement facility for geriatric chronic care. The entrance for the National Defence Medical Centre (NDMC) is to the immediate west of the Rideau Veterans Home. NDMC is the major-treatment centre serving Canada's Military with a full complement of medical services.

R. J. Nicol Homes Ltd. has recently completed a 133 1 unit condominium apartment complex east of the subject at 1440 Heron Road.

A new 1,770 sq. m. fire station and communication centre was recently developed at 2355 Alta Vista Drive at the corner of Randall Avenue.

The Lynda Lane lands are situated in a corridor comprising of an area of approximately **168** acres. This corridor is currently under study. The lands are designated in the FLUP for parkway and recreational pathway use. NCC wants to dispose of the lands for development at highest and best use but is prepared to keep a corridor pathway.

Proposed Developments for the Area:

- In 1973, approximately 82 acres of land was sold to the Province of Ontario for the development of the Ottawa Health Sciences Centre. Approximately 30.2 acres to the east of the OHSC have been reserved for the development, teaching, research, health care and other allied used connected with the Health Sciences Centre. Currently a proposed joint development with the Ontario Ministry of Government Services and the City of Ottawa is planned. This is to be known as the Science Technology Business Park. Some of the lands at the eastern extremity of the 30.2 acre parcel will be made available for the Perley Hospital.
- In December, 1991, the NCC sold a 10 acre parcel of land to Veterans Affairs fronting on Russell Road. It is located just east of the proposed major institutional complex. The parcel was purchased on the basis of alternative zoning to low and medium density residential uses but will be used for the development of the Perley Hospital.
- Upon completion of the construction of the Perley Hospital, the Rideau Veterans' Home will be closed by Veteran Affairs and the geriatric facilities will be integrated into the new hospital complex. The VA lands will probably become surplus to their requirements.
- As early as 1974, the Official Plan of the Regional Municipality of Ottawa Carleton included the proposed Alta Vista Parkway in the Alta Vista Corridor. Studies have indicated that a six lane ultimate configuration would be required to maximize the capacity of the roadway. In a recent interim study on the design plans for the different alignments, the parcel shapes yielded about 16% park space. The width of an at-grade right-of-way is approximately 95 metres and a depressed roadway 85 metres.

- The corridor to the south of the Lynda Lane lands is currently under study. These lands do not fulfil the current criteria for inclusion in the NILM. As potential NILM lands, the grouping requires special management action and cyclical reviews at the Treasury Board Secretariat. NCC plans for the lands are to be reviewed every five years. Normally lands are not to remain in the category beyond ten years (Aide **Memoire** September 15, 1988).

Proposed Development for Lynda Lane lands:

- University of Ottawa is proposing an innovative proposal to combine senior citizen's housing, medical student residences and a teaching administrative facility in partnership with an international organization called PACE 2000 (Program for Autonomy and Communication for the Elderly). The facility would contain:
 - 1) housing for 140 medical and nursing students;
 - 2) 100 residential units;
 - 3) a community health care centre
 - 4) offices for PACE 2000; and
 - 5) sports facilities.

Executive Management Committee Decision March 3, 1992

- That the land requirements for the innovative proposal of the University of Ottawa, which is consistent with the health care initiatives undertaken in the area, be given priority on the basis of the objectives stated in its proposal, and not on the basis of the status of the University or the other parties in the circulation process.
- That the proposal, from a land use perspective, coincides with the best interest of long term planning of the Capital and is consistent with long term planning objectives of these (currently) federally (NCC) owned lands.
- That negotiations between the NCC and the University of Ottawa for the disposition of the land for the use proposed be pursued further and **finalized** if possible.

Other Interested Parties in the Lands

Regional Municipality of Ottawa-Carleton, City of Ottawa, la Section publique du Conseil scolaire de langue française d'Ottawa-Carleton and the Ottawa Roman Catholic Separate School Board.

Greenplan:

Proposed Ottawa 'greenway' is a network of parks and open spaces linked by paths and waterways. The City has no plans to buy the federally-owned lands needed to complete the links in the **greenway** network. There are ongoing discussions with the NCC on this matter.

Screening I Level EA:

Upon completion of screening I, a level II screening was recommended. Arguments in support of the decision were that the proposed disposition:

- 1) conflicted with the Federal Land Use Plan;
- 2) went against the National Interest Lands Mass program; and
- 3) could hamper implementation of the Regional Municipality of Ottawa-Carleton and City of Ottawa Official Plan regarding the proposed Alta Vista Parkway.

These arguments are rebuttable.

The following is an excerpt from the memorandum attached to the screening I assessment:

“the disposition of the property would entail the loss of intensively used sportsfields and seriously compromise the integrity of a buffer zone of great social value between developed areas. Therefore, the disposition and ensuing development of the land would unfailingly incur local population’s criticism on the NCC. Public concern could also be of a larger extent as regional population and groups of concerned citizens could really get the impression that the NCC is now losing interest in those green corridors that have become distinctive of the Capital’s image

and that the NCC does not satisfactorily fulfil its mandate any more. Actually, the disposition of the property may well be seen as a worrying precedent especially since the land in question forms an important piece of the green corridor network by linking up three large strips of undeveloped land. With this proposal, it is in fact the entire green corridor network that is apparently challenged, as well as the NCC's sound reputation as regards to planning, and land management and use practices it greatly contributed to build up over the years.”

Revenue Generation:

In order to help fill the gap in required resources, NCC is continuing its efforts to improve revenue generation. To that end a five (5) year acquisition and disposal plan has been prepared and the plan includes the Lynda Lane lands. While there is this need to increase revenue, NCC land sales are, and will undoubtedly continue to be, lower than anticipated due to market conditions, as well as cut backs in spending by the municipal and provincial governments. This will have a major impact on the amount to be generated from land sales which is set at the beginning of each fiscal year.

The Land Acquisition and Disposal Strategy (Treasury Board Decision 813 181, March 15, 1990) describes the manner in which the NCC plans and establishes priorities for the acquisition and disposal of real property. Given the foundation established by the joint NCC-BRPM property review and articulated in the Aide **Memoire** to the Treasury Board's decision respecting the review, the NCC is to focus its attention on the protection and consolidation of the National Interest Land Mass. These are the lands determined essential to the realization of the Commission's long term planning objectives for Canada's Capital, and are to be retained by the NCC on behalf of the federal government in perpetuity. Without proceeds from the disposal of lands, these land purchases cannot be funded.

As an aside, Treasury Board guidelines for appraisals of real property provide that property rights are to be appraised at their highest and best use, including uses that might be made possible by rezoning. In short, potential zoning changes are to be considered.

4. UTILISATION DES VÉLOS DE MONTAGNE AU PARC DE LA GATINEAU

La pratique du **vélo** de montagne comprend trois (3) éléments essentiels: la bicyclette, son conducteur et un terrain de pratique **adéquat**; ces éléments ont **tous** des impacts sur l'environnement.

Au **parc** de la Gatineau, la présence des premiers **vélos** de montagne (VM) remonte à 1984 et cette **activité** a rapidement pris de l'expansion. En 1989, la direction du Parc **adoptait** une directive interimaire concernant la gestion du VM et **celle-ci** fit l'objet d'une évaluation environnementale **préalable**.

*"L'évaluation environnementale nous indique que l'activité "vélo de montagne" peut comporter des **risques** d'impact **sur** l'environnement naturel et social. Cependant, la **portée** de ces risques est **présentement difficile à jauger** pour trois raisons: 1) l'activité est relativement **récente** et n'est pas **suffisamment documentée**, 2) le risque d'impact est fortement dépendant de la directive et des modes de gestion qui lui sont attachés et, 3) **nous ne possédons pas de données sur** le potentiel d'utilisation des pistes ouvertes au **vélo** de montagne dans le parc de la Gatineau.*

*Pour ces raisons, les **mesures** d'atténuation recommandées pour **plusieurs** des risques d'impact prennent la **forme d'études** et de **monitoring** de l'activité. Ces études et monitoring devront **être faits de façon** périodique durant deux **années consécutives afin** que puissent aussi **être connue l'efficacité** des **mécanismes** d'atténuation mis en œuvre durant la première **année**."*

L'activité de VM fut **alors officiellement** reconnue, les sentiers autorisés pour la pratique de ce sport furent identifiés et une **méthodologie** de suivi environnemental fut **développé**.

Les variables étudiées pour un sentier sont: texture du sol, drainage, pente, recouvrement rocheux, érosion, racines, traces de pneus, rigoles, élargissement ou contournement et épaisseur du dépôt meuble.

Puisque les sentiers reconnus pour le VM étaient ou des anciens chemins ou des sentiers récemment réhabilités, les deux premières années d'études portèrent sur la capacité environnementale des sentiers, demandés par les adeptes du VM ou utilisés illégalement par ceux-ci, à soutenir cette activité. Le résultat fut qu'aucun était apte à soutenir ce sport sans un projet préalable de réhabilitation. Spécifions qu'au parc de la Gatineau, les sentiers n'ont pas à être créés puisqu'ils existent depuis la première moitié du siècle.

La troisième année (1992) d'étude porta sur les sentiers officiellement reconnus pour le VM. Il fut constaté que sans un entretien régulier, il y a dégradation des sentiers.

Premier bilan de ces trois années d'études:

- il est possible d'aménager des sentiers aptes à supporter l'activité de VM;
- il est essentiel non seulement d'avoir des sentiers adéquats mais de les entretenir;
- plusieurs cyclistes croient qu'il n'y a pas d'impacts et sont peu respectueux du milieu en utilisant des sentiers non autorisés;
- l'observation de certains cyclistes sortant du Parc, révèle une perte nette de sol;
- la création non contrôlée de sentier secondaire n'a pas été observée;
- le plus grand problème rencontré n'est pas la bicyclette, ni le terrain de pratique mais le conducteur;
- le réseau existant offert pour le VM sera maintenu et aucun nouveau sentier offert tant qu'il n'y aura pas maîtrise de la gestion de l'activité.

Après ce rapide survol, nous constatons que les impacts de l'activité étaient soupçonnés sans être vraiment connus **certains** sont d'ailleurs encore inconnus. Comment alors aurions-nous pu identifier les impacts cumulatifs?

Nous poursuivrons le suivi environnemental et dans plusieurs **années nous** serons à **même** de décrire les impacts directs et indirects de cette **activité**. Dès l'an prochain, l'emphase sera mise sur une **campagne** de sensibilisation **couplée à** une meilleure information.

Combien de **projets** au pays ressemble à ceci: **technologie** nouvelle, **comportement** inconnu des utilisateurs...? Pour **tous** ces **projets** il me semble difficile d'identifier les impacts cumulatifs.

Ce qui est essentiel **c'est** le suivi environnemental qui **permet** non seulement d'identifier les impacts **mais** de les corriger.

Questions

- Pourquoi ne pas avoir interdit l'activité devant tant d'inconnus?

Le **Parc touche** le milieu urbain et de ce **côté** il n'y a pas E.E. du zonage et des plans de développement sur le **Parc** alors une population **croissante** s'installe en bordure **à portée** des sentiers; il est utopique de penser en **contrôler** les **accès**. **Même** sous LCEE toute l'approche serait **restée** pareille.

- Est-ce qu'il existe **un** impact **positif** suite à l'**arrivée** du VM au **Parc**?

Oui, la reconnaissance de l'obligation de **gérer** nos sentiers en dehors de la saison hivernale.

- Comment **évaluer** les impacts cumulatifs dans un milieu naturel **protégé** lorsque ce ne sont pas les infrastructures en tant que telles qui les causent **mais** le comportement des utilisateurs et que ce comportement se **modifie** dans le temps?
 - sans réponse --- toujours une question de suivi!

- Est-ce que les **exercices de planification** (plan directeur) et leur E.E. peuvent aider?

C'est selon si l'on regarde l'aménagement **et** son utilisation et non pas seulement l'un des deux (ex. nb. km **sentier/secteur-zone** **vs** ski, randonnée pedestre, velo...).

D'autre part, le plan directeur offre un zonage en **fonction** de la capacité de support du milieu biologique (p. 50); cependant la détermination de cette capacité de support pour le milieu terrestre pour chacun des secteurs est **très difficile à** établir **avec** les connaissances actuelles et est **donc** peu utile pour **prévoir** les impacts cumulatifs.

- Quels **étaient** les impacts cumulatifs **soupçonnés**?
 - croissance d'activités **illégales** et génération de **déchets** dans l'arrière-pays: aucune observation **nous permet d'affirmer** que ces impacts sont réels;
 - **conflit** d'utilisateurs (pedestre vs **vélo**): plus le temps passe moins il semble que ce **soit un problème** réel; il s'agissait **beaucoup plus d'une** appréhension;
 - **conflit avec** la faune: aucune mention de mortalité; le stress **chez** l'animal, qu'il pourrait subir par l'arrivée silencieuse et rapide de **cyclistes**, est inconnu et des méthodologies **d'évaluation** devraient **être** développées;
 - dégradation des sentiers par l'ajout d'un plus grand nombre d'utilisateurs: il y a eu prise de conscience de l'obligation d'entretenir les sentiers hors de la saison hivernale.

- Comment alors **avec** ce “best professional judgement”, qui d’ailleurs **c’est avéré** inadéquat, affronter les groupes de pression?

Il faut fournir des résultats **précis** sur des impacts réels.

5. PROLONGATION DU CHEMIN HUNT CLUB

Le Projet

La Municipalité régionale d’Ottawa-Carleton faisait **connaître**, il y a quelque temps, son intention de prolonger le chemin Hunt Club vers l’ouest, du chemin Merivale jusqu’à la future autoroute 416, et de réaliser ainsi la deuxième phase du **projet** de prolongement ouest de cette route. La première phase du **même projet**, jusqu’au chemin Merivale, qui avait déjà inclus la construction (terminée en 1985) **d’un** nouveau pont franchissant la **rivière** Rideau, vient tout juste **d’être complétée** et ouverte **à** la circulation.

Le **projet** a pour but d’améliorer la circulation est-ouest **afin** de répondre aux besoins anticipés et de **remédier à** la congestion actuelle dans les quartiers résidentiels avoisinants par cause d’un manque de liens routiers **efficaces** dans cette direction. En fait, il **s’insère** dans le plan de la Municipalité régionale de prolonger le chemin Hunt Club dans les deux sens pour en faire une **artère** régionale majeure, sorte de voie de contournement joignant les autoroutes 416 et 417, longeant la Ceinture verte et permettant **d’éviter** la ville. Des raccordements **ultérieurs** vers l’ouest, aux chemins Richmond et Hope Side, puis **à** la promenade Terry Fox et au chemin March **à** Kanata, **figurent** aussi dans les plans et résulteraient en la création d’une véritable route **périphérique** dans la **capitale**.

Quant au prolongement ouest du chemin Hunt Club, la deuxième phase de ce **projet**, dont il sera plus particulièrement question, **porte** sur une longueur de neuf kilomètres et demi et **consiste** en **une** route de type urbain **à** quatre voies. Un **élargissement** ultérieur **à** six voies est **également** envisagé.

Le trace de la route longe les quartiers résidentiels de Tanglewood, de Manordale et d'Arlington Woods et se trouve presque entièrement sur des terrains fédéraux: la Réserve forestière de Pinhey, propriété de la Commission de la capitale nationale, et la Centre de recherches alimentaires et zootechniques d'Agriculture Canada, tous deux parties intégrantes de la Ceinture verte administrée par la Commission de la capitale nationale.

L'évaluation Environnementale

Le contexte

Le projet était d'abord assujéti à la *Loi sur l'évaluation de l'environnement*

de l'Ontario et à la procédure particulière établie pour les projets relatifs aux routes municipales (*Class Environmental Assessment for Municipal Road Projects*). La Municipalité régionale était donc tenue de produire un rapport *d'évaluation* environnementale.

Puisque, d'autre part, aussi bien la Commission de la capitale nationale qu'Agriculture Canada devaient rendre des décisions quant à la cession des terrains requis, le projet allait se trouver également assujéti au *Décret sur les lignes directrices* visant le *Processus d'évaluation et d'examen en matière d'environnement*.

Pour éviter, toutefois, l'évaluation en double, et même en triple, du même projet, les deux autorités, fédérales s'entendirent pour mener une évaluation conjointe, puis de fonder celle-ci sur le rapport d'évaluation environnementale qui avait été préparé précédemment par les soins de la Municipalité régionale. Elles avaient d'ailleurs participé toutes deux à cette évaluation en tant que membres du comité directeur qui avait été formé, ce qui fut pour elles l'occasion de faire valoir leur point de vue, de mettre de l'avant des recommandations et de formuler des exigences.

Une séance publique d'information et de consultation fut tenue au cours de l'évaluation fédérale afin d'en présenter les résultats préliminaires et de sonder l'opinion de la population locale à l'égard de certaines préoccupations qui avaient déjà été exprimées.

La rapport de l'évaluation environnementale fédérale préparé par la Commission de la capitale nationale avec la collaboration d'Agriculture Canada conclut finalement à l'acceptabilité du projet en autant que certaines mesures additionnelles soient prises. Ces mesures concernaient notamment les effets que le projet risquait d'entraîner sur la végétation, sur l'eau souterraine et sur la qualité de l'air, les effets des sels de déglacage sur la qualité de l'eau et des sols, ainsi que l'utilisation future des terrains résiduels qu'allait laisser la construction de la route.

Prise en considération des effets cumulatifs

La viabilité du Centre de recherches d'Agriculture Canada fut l'objet de préoccupations tout au long de l'évaluation environnementale du projet; préoccupations que se partagèrent d'ailleurs aussi bien Agriculture Canada et la Commission de la capitale nationale que le public en général. C'était d'ailleurs dans le but de réduire les incidences du projet sur le fonctionnement du Centre de recherches et les débordements de l'urbanisation sur la Ceinture verte que les autorités fédérales avaient insisté sur le choix d'un tracé le plus au nord et le plus près des limites de terrains qu'il soit possible, compte tenu des effets sur les quartiers résidentiels voisins.

Les appréhensions à l'égard de la viabilité du Centre de recherches prirent cependant une nouvelle ampleur lorsque furent constaté le nombre et l'envergure de différents autres projets de construction ou d'amélioration d'infrastructures régionales dans les alentours. Ainsi:

1. des plans existaient pour élargir toutes les routes régionales qui délimitent ou qui traversent les terrains du Centre de recherches (avenue Woodroffe, chemins Greenbank, et Fallowfield);
2. le projet de construction de l'autoroute 416 prévoyait le déplacement et l'élargissement du chemin Cedarview sur les terrains du Centre de recherches;
3. la Municipalité régionale allait également de l'avant avec son projet de prolongement sud-ouest du réseau Transitway (voies rapides pour autobus en site propre), y compris une station avec parc de stationnement incitatif, toujours sur les terrains du Centre de recherches.

Bref, c'était toute la question de la viabilité de l'établissement de recherches qui se trouvait tout d'un coup posée. Des lors, il n'apparaissait plus suffisant d'évaluer les conséquences (perte de surfaces arables, effets des sels de **déglacage**, du bruit, de l'**éclairage**, etc.) du seul **projet**; il fallait également tenir compte des menaces que faisait peser, sur l'avenir du Centre de recherches, l'ensemble des **projets** dans les environs; il était aussi devenu évident, plus que jamais, que les perspectives d'avenir du Centre de recherches devaient être examinées dans le contexte d'une urbanisation **croissante**, multipliant et accentuant sans cesse les difficultés de fonctionnement.

En l'occurrence, **donc**, l'effet cumulatif avait été discerné dès le début: il s'agissait de l'atteinte portée à la viabilité du Centre de recherches; restait maintenant à en évaluer la portée. Il fut donc entreprise de définir les conditions minimales en-dessous desquelles la viabilité des activités de l'établissement ne serait plus assurée, de déterminer les limites (ou «seuils») à ne pas franchir et en regard desquelles les conséquences des **projets** allaient pouvoir, d'une façon ou d'une autre, être mesurées. Or, et malgré la qualité des ressources humaines sur lesquelles le Centre de recherches peut compter, ni ces conditions minimales ni ces limites ne purent jamais, même vaguement, être établies. Faute d'arguments probants, il dût donc être admis que la route proposée pouvait être accommodée.

En parallèle, et comme complément à la première, avait été tentée une étude des effets cumulatifs des différents projets d'infrastructures régionales (routes, conduites d'eau potable ou d'égout, etc.) sur le Centre de recherches. Mais, pour une raison ou une autre, cette étude avait débordé assez vite pour s'étendre à l'ensemble de la Ceinture verte et se transformer de la sorte en une évaluation environnementale du plan d'équipement de la Municipalité régionale, dont l'enjeu consistait en l'aménagement et la fragmentation, en la viabilité, non plus du seul Centre de recherches d'Agriculture Canada, mais de la Ceinture verte dans son entier. Cette étude ne survécut pas à de nombreuses difficultés, ne put à peine démarrer et ne fut pas menée à terme. Au moins l'exercice aura-t-il eu l'avantage de faire connaître précisément les plans et calendriers de travail de la Municipalité régionale.

Finalement, la question des effets cumulatifs fut renvoyée à l'étude de la Commission de la capitale nationale portant sur l'avenir de la Ceinture verte, considérée comme un cadre de discussions plus approprié pour en discuter. Par contre, l'évaluation environnementale fédérale réitéra l'opposition de la Commission de la capitale nationale au prolongement ultérieur du chemin Hunt Club vers l'ouest, à travers la Ceinture verte.

6. MAJOR'S HILL PARK

The Major's Hill Park case study differs a little from the other projects (as we normally refer to). In fact, the problem is a perfect example of the potential cumulative environmental impacts that can occur when several independent projects take place on a site during a short period of time.

For the purpose of this case study, we will be looking at two environmental assessments that were conducted jointly by the National Capital Commission and the Association for the Canada Day Celebrations and the Festival franco-ontarien. These activities took place in Major's Hill Park during the summer of 1991.

These events, along with the Canadian Tulip Festival, are part of the summer activities that are held in the Capital on an annual basis. All these events take place in Major's Hill Park which is the property of Public Works Canada and managed by the National Capital Commission. The Canadian Tulip Festival and the Festival franco-ontarien were required to obtain a permit from Public Works Canada and the National Capital Commission to hold their activities. The Canada Day activities are an initiative of the National Capital Commission.

Both screenings were undertaken separately, and both concluded that each event (Canada Day and Festival franco-ontarien) could proceed with their activities because there are either no significant adverse effects (decision code 2) or the potentially adverse impact may be mitigated (decision code 3). However, when we take into consideration that both these events are back to back and follow the Canadian Tulip Festival, the cumulative impacts may alter the environmental assessment's conclusion.

For both events the environmental assessments were conducted using the NCC environmental impact assessment screening I form. It consisted in revising the activities involved and the features or resources which might be affected. Twenty two (22) activities were inventoried for the Canada Day festivities and seven (7) for the Festival franco-ontarien. Each activity was considered separately and cumulative impact is taken in consideration only for each specific activity (i.e. trampling down tree's roots at a specific ares). Therefore, at no time was the cumulative impact of both events taken in consideration to determine if they should have gone ahead. However, it was noted at the time that there was a potential for cumulative impacts on the park in general. The grass was dead after the events and the trees were having more and more problems. Following these concerns, the NCC took upon itself to further examine the cumulative impact in the pack and the NCC went to a level II environmental assessment.

We feel that every possible action was taken to make sure that the environmental assessments be performed to the best of our knowledge. Nevertheless, we are left with many questions regarding issues surrounding the cumulative environmental impacts:

1. Who (Public Works Canada, ELM, National Programming, Festivals) is responsible for including the cumulative impact f other activities in their environmental assessment? How can this be coordinated?
2. When do we have to take in consideration the cumulative impact of other activities? Which activities? Past years and future years as well?
3. Is National Programming responsible for defining the temporal boundaries of the environmental assessment although we are only a user of the facilities for an event?
4. What happens when the environmental assessment procedures of another organization differ from the NCC's?
5. Is an event a project or is it the overall use of the part facilities that becomes the project?
6. How can we assess future projects when we are not the property manager of a facility?

7. Aren't we forced to pass to an IEE whenever we need to better our knowledge on potential cumulative impact?
8. What happens when upper management do not take in consideration the cumulative impact when faced with the decision of either cancelling an event or choosing between two events: especially when both these events are not an initiative of the same organization?
9. Who is responsible for ensuring that the cumulative impact is considered by all organizations?

I am convinced that many more questions will arise following this presentation.

7. THE GREENBELT MASTER PLAN

Project Description

The NCC initiated a three year study to prepare a new Greenbelt Master Plan. This plan is to be produced between 1990-1993, and represents the first major review of the Greenbelt, since its acquisition in the 1960's. This plan will provide the answers to three main questions:

- what **roles the** Greenbelt plays over the next three decades?
- what sorts of **activities** should happen, and where, in the Greenbelt?
- what **actions** should the NCC and its partners be taking to ensure the plan's implementation is a success?

The Greenbelt is an expanse of land surrounding the urban core of the City of Ottawa to the South. This 20,000 ha parcel of land is primarily rural, consisting of farms, forests, wetlands and federal establishments, such as the Ottawa International Airport, Agriculture Canada's Animal Research Centre and Department of National Defense lands. Some private property still exists in the Greenbelt, and the NCC leases some residential dwellings not associated with agriculture lands. Major landscape and environmental elements include: a diverse mosaic of forest types and maturation stages, a classical domed acid bog, working and abandoned farmlands, dwellings, business activities, recreational lands, transport infrastructure, a network of groundwater fluxes,

recharge zones. seepages and surface drainage varying from wooded swamps to major rivers. These elements are representative of most of the environmental planning problems anywhere in Canada.

Status

The project was initiated in August 1991. No final decision has yet been taken; the first phase was completed in August 1992 and an accompanying environmental assessment¹ was produced.

Issues/Challenges

At a project assessment level there are numerous problems with cumulative impacts which have been referred to the Master Plan level; some examples are the Hunt Club extension, the Trim Road widening, **Conroy Road extension, Fallowfield, Highway 416**; there are also a number of proposals to come, such as the Inner Ring Road, the extension to Rockcliffe Parkway, three Transitway extensions (East to Orleans, South to Barrhaven and South to River Ridge) etc.; Ontario Hydro has also a number of easement requests through the eastern and western parts of the Greenbelt.

The above mentioned issues are representative but additionally the planning and the environmental assessment process has to address some other relevant concerns such as the following:

- urban growth (satellite communities)
- infrastructure (see above mentioned examples)
- environment (ecological systems, natural areas, fragmentation and linkages)
- recreation (demands and compatibility)
- farming
- buildings (maintenance of farm and residential buildings)
- programs (accessibility)
- management (local use and federal purpose)

¹**Environmental** Assessment in Land Use Planning. The Greenbelt Environmental Assessment, by H. Klein, April 1992.

The Environmental Assessment

Previous experience with similar types of projects convinced NCC staff of the following requirements:

- EA process to be integrated with land use planning process;
- begin the EA before any plans are prepared in order to identify environmental issues that can be integrated in the planning process;
- identify positive, negative and cumulative environmental impacts;
- have a public consultation component;
- identify indicators or standards against which to evaluate the significance of the issues identified.

Assessment Techniques/Steps

As of to date the first phase of the EA process has been completed. A report was produced.⁷ This report includes an EA issue scoping for the environmental review of the Greenbelt Land Use Plan. As part of the scoping process the issues were classified as being either “environmental” or “administrative”. In addition to issue identification, environmental planning objectives (EPO) and wherever possible indicators were also identified. The EPO represents the accepted approach for addressing an environmental issue. Public consultations were held in June 1992.

An overall methodology is currently being developed in order to initiate the environmental assessment of land use concepts and the recommended concept; it will be based on assessing various land use concepts against environmental objectives, possibly in a matrix format. EA monitoring regime is being prepared for implementation. Public consultation will be integrated with the planning process.

⁷Environmental Assessment in Land Use Planning. The Greenbelt Environmental Assessment, by H. Klein, April 1992.

Some issues to be addressed re cumulative impact assessment

- How should geographic and temporal boundaries be set for the assessment of cumulative impacts? As of yet, the scoping exercise did not set the geographic and temporal boundaries for the project. However, the overall methodology that is being developed for the subsequent steps will take into account cumulative impact assessment as per C-1 3 requirements.
- How should different level jurisdictional conflicts and pressures (RMOC, municipalities, etc.) be resolved and how should all relevant information and assessments of **RMOC's** and other's projects across or adjacent to the Greenbelt be obtained.