# ENDANGERED SPECIES LEGISLATION IN CANADA: A DISCUSSION PAPER

Environment Canada Canadian Wildlife Service

### **Foreword**

Many Canadians feel strongly about the conservation of endangered species in this country and have expressed a desire for stronger legislation. Achieving legislative protection will be very complex. Issues such as federal-provincial co-operation, financial implications and effects on economic activities will need to be examined closely.

Consequently, this government, while strongly supporting the need for protective measures, wants to carefully consider all of the options and obtain input from the widest possible range of interested parties before deciding on the best course of action. The purpose of this discussion paper is to provide some background on the issue and to present an approach for potential federal legislation.

I encourage you to review the document and provide your comments on this most important matter.

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### 1. INTRODUCTION

In an ideal world, species should not get to the point of becoming threatened or endangered through human activities. Preventive measures should be in place through ongoing wildlife and habitat management programs and legislation. Governments at all levels are working together to improve on a national endangered species program of which the primary emphasis will be on preventing species from becoming at risk. However, from time to time, species may slip through the cracks and become at risk of endangerment. When this occurs, emergency measures may need to be taken. One way in which this could be achieved is through an national endangered species legislative framework and federally through an endangered species act. An endangered species act however, should be viewed as only one tool in a larger kit. To be effective it must be linked to other legislation, accompanied by policies and operational planning schedules and implemented through agreements with other partners.

Ideally a federal act would establish definitions and criteria for assessment and listing of species endangered nationally and would trigger the environmental assessment and review process. It could also provide guidelines and direction for recovery actions for species designated as nationally endangered. It must reflect Canada's international obligations through such fora as the Convention on International Trade in Endangered Species (CITES) and more recently the Convention on Biological Diversity.

The purpose of this paper is to generate and focus discussion on a proposed national legislative framework and more specifically on what the federal legislative component of such a framework could contain.

### Ecological background

When people can no longer safely drink the water, breathe the air, or grow crops on their land, they understand quite clearly that they have an environmental problem. But, when an obscure plant or insect ceases to exist somewhere on the planet, or even when celebrity species like rhinos, tigers or Whooping Cranes are endangered, most people fail to recognize the consequences. They fail to recognize that the well-being of the planet and their own survival is as equally dependent on the continued existence of a variety and abundance of other lifeforms as it is on the continued existence of clean water, fresh air and healthy soils.

Indeed, the air, water, land and living things (biota) all interact, and together, form the ecosystem. Just as the biota depends on the non-living components, they in turn are affected by the biota to maintain the conditions to support life as we know it. For example, microorganisms in the soil maintain the conditions necessary to grow plants and the growth of green plants maintains appropriate levels of oxygen.

In short, what humans now realize is that the well being of the planet is dependent on the maintenance of a normal level of diversity, abundance and distribution of species and populations. Equally important is the maintenance of a wide diversity of ecosystems.

Unfortunately the biotic component of the ecosystem is under stress. The number of species is rapidly declining. Some scientists feel the decline is as fast as 74 per day or three per hour (Wilson, 1992, p. 280).

Besides extinction, many remaining species have had their abundance and distribution dramatically reduced through the massive disruption of natural ecosystems due to increasing human pressures and inappropriate agriculture, forestry and urbanization practices.

There have been other great species die-offs in the 600 million year history of life on the planet. Paleo-biologists postulate at least five major episodes, including the disappearance of the dinosaurs (Wilson, 1992, pps. 29 and 280). The difference this time is the rate of extinction. It is far faster and all encompassing, and for the first time, is being caused, in part consciously by one of the biological components, the human species.

The vast majority of the current extinctions are thought to be occurring in other parts of the world, primarily the tropical rainforests. This trend is in part, because the greatest diversity of life occurs in the tropics and there are tremendous pressures to clear the rainforests for timber or other land uses.

Canada, being a northern country and recently glaciated, has a relatively low level of biological diversity. Nonetheless, the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) has listed nine extinctions, and eleven extirpations since the arrival of Europeans.

As of April 1994, there are 237 species listed as endangered, threatened or vulnerable. This list does not include a large backlog of species whose status is yet to be determined. While this listing represents a large proportion of the taxa covered by COSEWIC, it does not indicate the tremendous loss of ecosystem diversity in areas such as the prairies and Carolinian forests.

### Socioeconomic concerns

The socio-economic value of biological resources to humans is clearly of great value, but is extremely difficult to quantify with current methodologies. The United Nations Environment Program (UNEP), is leading an effort to attempt to describe the scale of this value.

As part of this effort, Filion et al (1993a) have prepared a framework for the research. The framework has five categories which in themselves indicate the range of values: a. direct uses with extraction such as for food, shelter or medicine; b. direct uses with little extraction as in tourism or for scientific/educational purposes; c. indirect uses primarily ecological functions important for human welfare; d. optional uses for which we are yet unaware as in new medicines and; e. passive uses such as the bequest values to future generations.

### 2. WHAT IS THE INTERNATIONAL CONTEXT?

Over the past two decades, the importance of maintaining biodiversity has come to the forefront of the international agenda. The results of such attention include the "World Conservation Strategy (WCS)" (1980) and its follow-up report, "Caring for the Earth" (1991), "Our Common Future", the report of the World Commission on Environment and Development (WCED) (1987) and most recently, the international "Convention on Biological Diversity" (1992).

### A. World Conservation Strategy

The WCS listed the "preservation of genetic diversity" along with the "maintenance of essential ecological processes and life-support systems", and the "sustainable utilization of species and ecosystems" as the three principal objectives for conservation. Further, WCS lists the prevention of the extinction of species as the highest priority action under the preservation of genetic diversity objective.

### B. World Commission on Environment and Development

The WCED report highlights the global importance of biodiversity in a number of sections such as, "The Earth's endowment of species and natural ecosystems will soon be seen as assets to be conserved and managed for the benefit of all humanity (p. 160). The report goes to state "A first priority is to establish the problem of disappearing species and threatened ecosystems on political agendas as a major resource issue. The World Charter for Nature, adopted by the UN in October 1982, was an important step towards this objective" (p. 162).

Further, in a summary of proposed legal principles for environmental protection and sustainable development, the WCED report includes, "States shall maintain ecosystems, and ecological processes essential to the functioning of the biosphere, shall preserve genetic diversity, and shall observe the principle of optimum sustainable yield in the use of living natural resources and ecosystems" (p. 348).

### C. Convention on Biological Diversity

The preamble to the Convention on Biological Diversity notes that the Contracting Parties are, "conscious of the intrinsic value of biological diversity and the ecological, genetic, social, economic, scientific, educational, cultural, recreational, and aesthetic values of biological diversity and its components". It further reaffirms that states are "responsible for conserving their biological diversity and for using their biological resources in a sustainable manner".

Article 8k of the Convention states that the Contracting Parties shall as far as possible and appropriate, in reference to in-situ conservation:

"develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations".

## 3. IS THERE A NEED FOR IMPROVED ENDANGERED SPECIES LEGISLATION IN CANADA?

### A. <u>Historical Concerns</u>

Concerns about the adequacy of Canadian legislation have been raised for over a decade. Singleton (1976, p.99) when speaking to a Symposium on Canada's Endangered Species and Habitats stated, "Three words characterize endangered species legislation in Canada: piecemeal, jumbled and cosmetic. Legislation itself is worthless without serious programs to implement the obvious intent of the Acts. Conversely, endangered species programs cannot possibly protect Canada's fauna and flora without the power of legislation to back them up".

Versteeg (1984, pps. 303-304) writing in the Ecology Law Quarterly concluded, "Interest groups devoted to preserving our flora and fauna must be extremely diligent in lobbying for effective conservation legislation administered by agencies that believe in the spirit of the law. Otherwise the modern tragedy of species extinction will continue unabated".

In 1989, the "Greenprint for Canada Committee", which consisted of 34 major conservation and aboriginal organizations submitted a report to the Prime Minister on a proposed "Federal Agenda for the Environment". One of the many recommendations included: "By 1992, enact a Federal Endangered Species Act that ensures federal funds are spent in ways that enhance Canada's biological diversity".

### B. Standing Committee on the Environment

In 1992, a coalition consisting of the World Wildlife Fund, the Canadian Nature Federation, the Canadian Parks and Wilderness Society, the Sierra Club of Canada and the Canadian Environmental Law Association submitted a brief to the Standing Committee on the Environment. The Committee was considering, among other items, the substance of the Agenda 21 chapter on Biodiversity. The brief, which was also officially endorsed by the Canadian Bar Association stated:

".... Environment Canada has determined, through a technical interpretation of the Convention, that no new federal legislation is needed to implement the biodiversity convention. That interpretation, in our view is simply wrong, particularly in the area of endangered species legislation", (p.11).

In response to the Coalition's Brief and others, the Standing Committee (1993, p. xiii) recommended:

"that the Government of Canada, working with the provinces and territories, consider the necessity of legislation to conserve biological diversity within Canada, and take immediate steps to develop an integrated legislative approach to the protection of endangered species, habitat, ecosystems and biodiversity in Canada".

### C. <u>Current public interest</u>

A paper (1993) by the Canadian Wildlife Service reported on a major Statistics Canada survey which asked, "How important is it to you that declining or endangered wildlife be preserved." A large majority (83.1%) felt that it was either very important (54.4%) or fairly important (28.9). This is virtually unchanged from the same survey results in 1981.

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The "Group of 8", a coalition of the eight major national NGOs most concerned about wildlife, presented a set of recommendations to the Minister of the Environment in June 1994. The recommendations are designed to provide a framework for the Group and the federal government to meet future conservation objectives. One of the recommendations calls for Environment Canada to:

"Examine the development of national endangered species legislation that commits federal, provincial and territorial governments to re-establish and/or protect endangered and threatened species and their habitats in Canada".

This public interest has been translated into political action through the introduction of three private members bills proposing endangered species legislation, Charles Caccia (C-209) and Robert Wenman (C-303) in 1991, and Charles Caccia (C-275) in 1994.

### D. Focus Group on Wildlife at Risk

In follow-up on the recommendation of the Standing Committee, a Focus Group on "Managing Wildlife At Risk: Do We Have The Right Tools?" was coordinated by Environment Canada in 1993. The Focus Group submitted ten recommendations on legislation and policy of which three are particularly relevant here:

"All provinces should enact comprehensive legislation governing endangered species, ecological reserves and planning to ensure the protection of species, ecological communities, and ecosystems.." The recommendation included the description of 14 individual features.

"Provinces having existing endangered species legislation should upgrade their legislation to reflect these standards".

"The federal government should pass an act equivalent to the provincial acts to cover species within its jurisdiction. The federal act should frame national minimum standards for designation and protection of endangered species of national significance and their habitats, and for the application of recovery strategies".

### 4. WHAT DOES EXISTING LEGISLATION COVER?

#### A. Federal

There are twelve pieces of federal legislation which could be applied to the conservation and protection of endangered species. These include the Canada Wildlife, Wild Animal and Plant Protection and Regulation of International and

Interprovincial Trade, Migratory Birds Convention, Fisheries, Forestry, National Parks, Canada Waters, Health of Animals, Plant Protection, Canadian Environmental Protection, Canadian Environmental Assessment and Museums Acts.

In total, these acts provide the federal government with most of the tools required for the work to be done in endangered species conservation under its jurisdiction. However, the conservation community has pointed out several perceived shortcomings.

These shortcomings include concerns that much of the legislation is enabling only and does not compel the federal government to act in certain key areas such as the development of a national list or the implementation of recovery plans. Others feel there should be a provision for federal action on any endangered species of national concern not being adequately protected by other agencies.

### B. Provincial

Four provinces, including New Brunswick, Quebec, Ontario and Manitoba have stand alone endangered species legislation. They are enabling in nature, and do not compel the governments to act. There is also a wide variation between the provisions in the various provincial acts on issues such as listing, recovery plans and protection of habitat.

All provinces and territories have wildlife management and other legislation with relevance to endangered species. There is wide variation in the content.

### C. Foreign

Other countries such as the U.S., Australia, and Japan have federal endangered species legislation which provide useful models in several respects. Both the U.S. and Australian federal acts are compulsory to some degree, in that the minister or secretary must implement certain parts. For example, both must establish a list of species at risk.

The U.S. Act assumes jurisdiction for all endangered species in the country, whereas the Australian act covers only Commonwealth (federal) species and activities on federally controlled lands.

With some variation, all three acts have provisions similar to those proposed by the Focus Group, described earlier, such as a listing process, recovery plans, habitat protection, and prohibitions on taking.

With respect to the other G7 countries, the U.K., Germany and France all, like Canada, provide protection to varying degrees through wildlife and other environmental legislation. Members of the European Community are also subject to a "directive on the conservation of natural habitats and of wild flora and fauna" which provides for the listing of species and habitats.

For a summary of the most relevant provisions of existing federal legislation with possible application to endangered species, as well as provincial and foreign endangered species legislation, see Foley and Maltby (1994).

### 5. COMMENTS ABOUT CANADIAN ENDANGERED SPECIES LEGISLATION?

Several commentators have provided ideas of what ideal legislation should contain, (Elgie, 1992), (Orenstein, 1990), (Douglas, 1991), and the Focus Group on Management of Species at Risk (1993). In summary, they include general considerations such as whether the legislation is compulsory or enabling, listing procedures, recovery plans, habitat protection, prohibitions, penalties, and international concerns. These components are described in more detail in section #7. The following are examples of comments which have been received.

Elgie, (1992, p. 6-7), in his submission to the Standing Committee presented the following opinions: "Up to now, the protection of endangered species has been treated as primarily a provincial responsibility. While we agree that the provinces have an important role to play, the extinction of species is not a local matter, it is a matter of national and international concern....The problem of protecting endangered species is too vast to be left to individual provinces....The federal government clearly has the constitutional jurisdiction to enact endangered species legislation....the federal government's authority rests primarily on its national concern power under the Peace, Order and Good Government clause of the Constitution."

Orenstein, (1990, p. 234) noted, "The Canada Wildlife Act does authorize the Minister of Environment to take some action regarding endangered species, but does not require him to do so"

Douglas, (1991, p. 22), pointed out that, "The COSEWIC listing system does not have the force of law, and no consequences attach to a listing. No provision is made for recognizing or protecting habitat, and there is no ecosystem approach."

## WHAT ARE THE MAJOR CONCERNS ABOUT PROPOSED FEDERAL ENDANGERED SPECIES LEGISLATION IN CANADA?

ased on experience with related legislative activity in Canada and the criticisms pplied to federal endangered species legislation in other countries, it is possible to nticipate what some of the concerns might be.

### . Provincial/Territorial

vould be expected that proposed federal legislation would generate considerable iscussion vis-à-vis federal-provincial roles and responsibilities. Therefore agislation would be drafted in close cooperation with the provinces.

### 3. Private Sector

n the United States there have been a number of high profile cases where the application of the Endangered Species Act has resulted in delays or disruptions to najor development projects or industries.

The best known of these incidents are where the concerns for protecting the nabitat of the snail darter resulted in the delay of a major dam in Tennessee (Rolf 1989), and where the protection of the habitat of the Spotted Owl has disrupted the forest industry in the Northwest (Pitts 1991).

n both examples, the major issue was control of land use resulting from efforts at nabitat protection. While Mathews (1994) has pointed out that only one-tenth of one percent of recovery/protection plans have resulted in the halting of a project, they generate the most opposition to the Endangered Species Act.

There were similiar concerns expressed in Australia during the passage of the Endangered Species Act. A coalition of industrial organizations (Bain et al, 1992) expressed serious concerns to the Prime Minister that the proposed legislation would "put at risk current and future investment..." as it "has the single objective of protecting species from extinction and fails to give proper regard to social and economic objectives; it provides the Environment Minister with wide powers of veto directly impinging on the nation's economic base and it represents a fundamental attack on private property rights of Australians without the necessary compensation safeguards".

Private sector representatives at the Focus Group on Managing Wildlife Species at Risk (Canadian Wildlife Service 1993), felt there had not been a demonstrated need for further legislation, and that emphasis should be placed on preventative rather than reactive measures. Other concerns can be expected from individuals fearing a restriction of activities on their own land, or restrictions to specimen collecting opportunities.

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Close consultation with all interested parties will take place during the drafting of the legislation.

### C. Aboriginal

In all five Comprehensive Land Claim Agreements between the federal government and Aboriginal peoples, the Wildlife Management Boards, play the major role in conservation activities. While the federal minister does have ultimate authority when dealing with federal species, all new wildlife legislation must be reviewed and, to some degree approved under the agreements. Therefore it will be necessary to consult closely with wildlife management boards to ensure that any new legislation not be counter to the existing agreements or traditional lifestyle. Consultation with all Canadian Aboriginal Groups will be undertaken in the development of any legislation.

### 7. SUMMARY OF POTENTIAL COMPONENTS OF ENDANGERED SPECIES LEGISLATION

The summary of components is based on comments from various sectors including elements derived from other stand alone endangered species legislation. Legislators, whether they be federal, provincial or territorial could consider the following checklist in deciding which of these elements are appropriate for their jurisdiction.

### 1. General considerations

- compulsory/enabling
- provincial/federal/national
- deadlines

### 2. Listing of species at risk.

- covering all taxa, including eggs, embryos etc. and parts.
- including categories prior to endangered, i.e. threatened or vulnerable.
- based on scientific and ecological principles
- opportunities for public input
- mechanisms for reclassification
- consistency of criteria at various levels

### 3. Recovery plans

- when appropriate from either an ecological or socioeconomic perspective
- measurable goals and criteria
- implementation schedule

### Habitat protection

- identification of critical habitats
- incentives for private owners, e.g. tax breaks
- priority of other land use statutes

#### **Prohibitions**

- against taking, molesting, disturbing etc.
- against buying, selling, transporting, importing, or exporting
- against destroying or degrading habitat
- against government activities impacting negatively on endangered species

### **Penalties**

- severe enough to act as a deterrent commensurate with the commercial and ecosystem value of endangered species and their parts.

### International components

- agreements for joint recovery programs of shared-dependant populations.
- contributions to protection of internationally significant endangered species.
- listing of foreign species.

### NATIONAL FRAMEWORK

### A. General considerations

- all jurisdictions have a role to play and are accountable for endangered species.
- legislation may be compulsory or enabling
- agreed to actions and deadlines for listing and recovery by all jurisdictions

### B. <u>Listing process</u>

- a scientific advisory committee to be established
- listing based solely on scientific evidence.
- nominations for listing can be made to the chair of the advisory committee by any interested party.

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- committee provides advice to the minister on whether the species, subspecies or geographically distinct populations are endangered, threatened, vulnerable, extirpated, extinct, or not at risk. Advice includes whether the species was at risk nationally, provincially/territorially or regionally. With peripheral species the report could include an assessment of its status in the other range states.
- the reports could include a description of critical habitats and an assessment of the factors causing the endangerment. For example is the threat due to human activity and if so what activity?
- the committee provides recommendations to ministers for designation.
- ministers could have a time frame in which to accept or reject the report and to provide a rationale for rejection. The list, at this stage would have an interim official status pending the acceptance of the report by each jurisdiction,
- the report could then be made available for public review.
- the list could then trigger action through related legislation such as the Canadian Environmental Assessment Act or provincial equivalent, and/or the RENEW-like process for recovery.

### C. Recovery

- a recovery team could be established to develop recovery plans
- the team would be chaired by the responsible jurisdiction and consist of members from other jurisdictions, Aboriginal people, NGOs, universities or other experts as required. It could also include members of stakeholder groups directly affected by the plan.
- an interim, abbreviated recovery plan could then be developed within a specified time frame with a recommendation for recovery action.
- the decision on whether or not to develop detailed recovery plan and on the nature of implementation would rest with each jurisdiction.
- regular progress report produced

### D. Habitat protection

- ministers could be enabled to provide compensation for loss of reasonable use to landowners.
- habitat protection could be a high priority.

### E. Prohibitions and penalties

- further to the recovery plan, prohibitions and penalties could be stipulated for listed species within critical habitats and throughout their ranges in each jurisdiction.

### F. Agreements with other jurisdictions and range states

- ministers could be enabled to enter into agreements with other range states for joint conservation actions, assistance or funding.

### G. Reporting

- both levels of government would be responsible for regular reporting of status determinations, recovery plans, overall progress, expenditures etc.

### 3. POSSIBLE FEDERAL COMPONENT OF THE NATIONAL FRAMEWORK

The federal component is based on the assumption that there is full harmonization with provincial legislation and implementation arrangements.

### A. <u>A stand-alone federal endangered species act (ESA) could:</u>

- Make the Minister of the Environment the accountable minister
- Apply only to federal species i.e. those listed in Migratory Birds
   Convention Act and Fisheries Act, on federal lands or affected by federal
   activities. It could also apply to species of national concern (criteria to be
   developed).
- Apply to all federal agencies.
- Compel minister to establish a list through a COSEWIC-like structure, and specify by regulation, membership, definitions, operations, procedures.
- Require minister to develop recovery plans for listed species.

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- Enable the minister to implement recovery plans based on a public review process.
- Enable minister to establish an endangered species recovery fund and specify mechanisms for cost-sharing arrangements, funding authorities, and third party agreements.
- Establish prohibitions and penalties for species under federal jurisdiction.
- Enable minister to identify critical habitats and to enter into agreements to secure their protection.
- Enable minister to enter into international agreements for the conservation of shared populations and provide assistance for the conservation of international populations.
- B. Amend or formally link related legislation to the endangered species act as follows:
  - Amend or link by regulation, the ESA to the Canadian Environmental Assessment Act to ensure COSEWIC listings trigger assessments of federal activities affecting these species. The process envisioned would allow for societal choices of options in full knowledge of the potential risks and benefits.
  - Amend or link by regulation, the ESA to the Canada Wildlife Act,
    Migratory Birds Convention Act and the Wild Animal and Plant Protection
    and Regulation of International and Interprovincial Trade Act to ensure
    COSEWIC listings of federal species trigger high priority action.
  - Amend or link by regulation, the ESA to the Canadian Environmental Protection, Fisheries, Forestry, National Parks, Canada Waters, National Museums, Health of Animals and Plant Protection Acts to ensure COSEWIC listings trigger high priority action in relevant areas.
- 10. Given the constitutional and fiscal realities of the country, plus the complexity of the task of protecting endangered species, the development of legislation is difficult for any government. Therefore, input from a wide range of stakeholders is required as early as possible.

Please forward any comments you have on this discussion paper to:

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### REFERENCES

- in, Robert., Wells, Dick., Eliason, Philip., Barratt, Paul., McIntosh, Lauchlin., wnsend, David., Hellicar, Meredith., and Douglas Daines (1992) Letter to Prime nister P.J. Keating.
- anadian Wildlife Service (1993) Proceedings of Focus Group on Management of pecies at Risk: Do We Have the Right Tools?, Environment Canada, Ottawa.
- auphine, Charles (1994) <u>Does Canada need an Endangered Species Law: How urrent Laws apply.</u> In, RECOVERY: An Endangered Species Newsletter, Winter 394, p. 7, Canadian Wildlife Service, Ottawa.
- ouglas, Kristan (1991) <u>Endangered Species in Canada</u>, Law and Government ivision, Library of Parliament, Ottawa, 25 pp.
- gie, Stewart (1994) <u>Does Canada need an Endangered Species Law: Lessons om the United States.</u> In RECOVERY, an Endangered Species Newsletter, Winter 994, p. 6. Canadian Wildlife Service, Ottawa.
- Ilgie, Stewart (1992) Federal Species Protection Legislation: The First Step in rotecting Biological Diversity. Sierra Legal Defense Fund. Vancouver, 12 pps.
- Filion, Fern., DuWors, Elaine., Boxall, Peter., Bouchard, Pierre., Reid, Roger., Gray, Paul., Bath, Alistair., Jacquemot, Andre., and Gregg Legare (1993a) The mportance of Wildlife To Canadians: Highlights Of The 1991 Survey. Canadian Wildlife Service, Environment Canada, Ottawa.
- Filion, Fern., Dogse, Peter., McNeely, Jeffrey, Markandya, Anil, and Michael Haneman (1993b) <u>Estimating Benefits From Biodiversity in Support of National Conservation Action Plans: The Cost of Inaction</u>. United Nations Environment Program, Nairobi.
- Government of Canada (1992) Minutes of Proceedings and Evidence of the Standing Committee on Environment, Issue No. 47, House of Commons, Ottawa, 109 pp.
- Foley, James and Lynda Maltby (1994) A Summary of Endangered Species and Related Legislation. Canadian Wildlife Service, Ottawa, ii + 33 pp.
- Government of Canada (1993) North American Agreement on Environmental Cooperation. Foreign Affairs and International Trade Canada, 42 pp.

Holst, Jon (1992) <u>The Unforeseeability Factor: Federal Lands. Managing For Uncertainty.</u> And The Preservation Of Biological Diversity. Public Land Law Review, vol. 13, pp. 113-136.

International Union for the Conservation of Nature and Natural Resources, United Nations Environment Program and World Wildlife Fund (1980) World Conservation Strategy, IUCN, Gland, vii + 150 pp.

International Union for the Conservation of Nature and Natural Resources, United Nations Environment Program and World Wildlife Fund (1991) Caring for the Earth, IUCN, Gland, iv + 228 pp.

Mathews, Jessica (1994) Endangered Species: The Truth, Washington Post, July 27.

Myers, Norman (1979) The Sinking Ark, Pergamon Press, Toronto, xiii + 307 pp.

Orenstein, Ronald (1990) The Federal Government Role in the Protection of Endangered Species. In: Canadian Bar Association Report, Sustainable Development in Canada: Options for Law Reform, Toronto.

Pitts, Erin (1991) The ESA and the Spotted Owl, Environmental Law, Vol. 21, no. 3, part II, pp. 1175-1189.

Rohlf, Daniel (1989) The Endangered Species Act: <u>A Guide to its Protections and Implementation</u>, Stanford, Environment Law Society, Stanford, 207 pp.

Singleton, Michael (1977) <u>Endangered Species Legislation in Canada</u> In: Mosquin, Theodore and Cecile Suchal (Eds), Proceedings of the Symposium on Canada's Threatened Species and Habitats. Canadian Nature Federation, Ottawa.

United Nations Environment Program (1992) Convention on Biological Diversity, Nairobi, 24 pp.

Wilson, Edward (1992), <u>The Diversity of Life</u>, The Belnap Press of Harvard University Press, Cambridge, 424 pp.

World Commission on Environment and Development (1987) <u>Our Common Future</u>. Oxford University Press, Oxford and New York, xv + 400 pp.

Versteeg, Hajo (1984) <u>The Protection of Endangered Species: A Canadian</u> Perspective. Ecology Law Quarterly, Vol. II, No. 3

### ADDITIONAL READINGS

Ajai, Olawale (1994) Integrating Biodiversity Conservation in Sectoral Laws and Policies: A Case Study of Nigeria with Considerations for Developing Countries, In, Widening Perspectives on Biodiversity, World Conservation Union and the International Academy of the Environment, Gland.

de Klemm, C. and C. Shine (1993), <u>Biological Diversity conservation and the Law</u>, IUCN, Gland and Cambridge, xix + 292 pp.

Kothari, Ashish and Shekhar Singh (1994) <u>Biodiversity and Indian National Law: A Conceptual Framework</u>, In, Widening Perspectives on Biodiversity, World Conservation Union and the International Academy of the Environment, Gland.

Maurer, April (1985) <u>Laws for the Protection of Threatened and Endangered Species in Canada</u>. Natural Resources Management Program, Simon Fraser University, Burnaby, British Columbia.

Stevens, Ward (1982) <u>Legal and Conventional Framework for Canadian Wildlife</u> <u>Service Activities</u>. Environment Canada Ottawa.

The Commonwealth of Massachusetts (1990) An Act to Provide Protection for Endangered and Threatened Species (S1768) Boston.