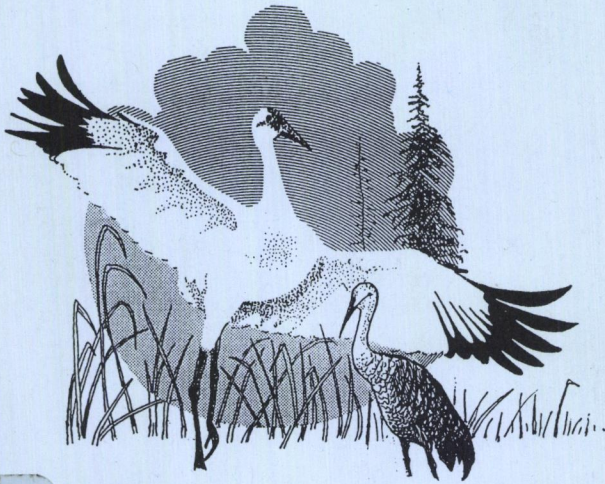


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*A National Approach
to Endangered Species
Conservation in Canada*

1995

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Discussion Document

Your comments are invited

A National Approach to Endangered Species Conservation in Canada

In each province and territory of Canada, there are wildlife management policies, programs and laws to protect the wildlife that is part of our natural heritage. Despite these measures, some 235 species are classified as endangered, threatened or vulnerable, from the whooping crane to wood bison and wild orchids.

Recently, the provincial, territorial and federal governments have been working to develop a national approach that would improve the ability of all governments to protect and conserve endangered species throughout Canada. As part of that national approach, each government is reviewing existing policies, programs and laws to determine what changes are required. The opinions of interested Canadians will form part of that review.

Your comments are invited on the proposed National Approach to Endangered Species Conservation in Canada, which is described in this document. You may express your views at one of the public consultation workshops which will be held in cities across Canada.

If it is not possible for you to attend one of these workshops, you may answer the questions in part four of this document and send your answers, or other written comments about endangered species conservation, to the address indicated. Please reply by May 15, 1995.

A National Approach to Endangered Species Conservation in Canada

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Part One:

Introduction

Part Two:

The Proposed National Approach

Part Three:

Implementation Considerations

Part Four:

Consultation Workbook:
Your Comments

This document has been prepared by a committee of federal, provincial and territorial government wildlife officials for discussion purposes. It does not necessarily reflect the views of any government. It is intended that public comments about the proposed national approach will be reflected in a final document for consideration by federal, provincial and territorial government ministers responsible for wildlife management in Canada in the Fall of 1995.

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ENDANGERED SPECIES
CONSERVATION IN CANADA
: DISCUSSION DOCUMENT.

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A NATIONAL APPROACH TO
ENDANGERED SPECIES
CONSERVATION IN CANADA
: DISCUSSION DOCUMENT.

Part One:

Introduction

All Canadian governments are responsible for the protection of species at risk. Because the challenge extends beyond the reach of any single jurisdiction, A National Approach to Endangered Species Conservation in Canada (Part Two) was developed for public discussion. It proposes WHAT needs to be done to ensure a cooperative national approach for the conservation of species at risk.

Part Three, Implementation Considerations, describes HOW the proposed framework could be implemented in practice. It is intended to stimulate discussion on:

- 1) the composition and operation of the institutions that should be created,
- 2) technical procedures that should be used to identify and assess species according to their risk of extinction, and
- 3) what action should occur for those species that are designated as being at risk.

Part Four invites your comments and suggestions on the proposed national approach.

Part Two:

**The Proposed National Approach to
Endangered Species Conservation
in Canada**

This part of the document contains the proposed National Approach to Endangered Species Conservation in Canada.

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Overview of the Proposed National Approach

Over the past 20 years, Canadian governments and private conservation organizations have paid increasing attention to species at risk, and have created two national committees to prevent the loss of species; the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) and the Recovery of Nationally Endangered Wildlife Committee (RENEW). In basic terms, COSEWIC's role is to identify species at risk; RENEW's role is to coordinate recovery planning for them.

This program has produced some notable results. However, from a national perspective, efforts have tended to be somewhat haphazard, unorganized and informal. Most certainly, the present approach could not meet the challenges of the future. Consequently, federal, provincial and territorial government wildlife officials have prepared a National Approach to Endangered Species Conservation in Canada.

The proposed national approach would address species in *all* taxonomic groups. The process for identifying those at risk would be more objective and open to public participation. Species found to be in trouble would become the subject of cooperative inter-governmental attention if they need it. Species and populations of local concern would be addressed by the appropriate jurisdiction.

The jurisdiction responsible for a species at risk would promptly indicate what actions it will undertake. The federal and all provincial/territorial governments would have a similar range of legal capabilities for protection and rehabilitation.

To implement the proposed approach, COSEWIC should become an independent group of scientists, specializing in conservation biology, reporting to the ministers responsible for wild species management in Canada. It would consult with the public during the assessment process, and report status designations directly to ministers. The committee would work closely with all jurisdictions and continue to be supported by a secretariat and a nation-wide network of experts on all types of species.

The proposed National Approach to Endangered Species Conservation in Canada

Purpose

To agree on a harmonized national approach to endangered species conservation in Canada.

Goal

To prevent any species becoming extinct as a consequence of human activities.

Underlying Precepts

1. All Canadians share responsibility for ensuring that species are not lost to extinction as a result of human activities.
2. The primary responsibility for wildlife management in Canada rests with the provinces and territories, except for fish, marine mammals and other marine organisms, which are the responsibility of the federal government; there is shared jurisdiction for migratory birds.
3. A national cooperative approach to endangered species management is required to reflect the

roles and responsibilities of federal and provincial/territorial governments. Endangered species conservation initiatives should be approached through integrated national and provincial/territorial regimes.

4. An effective and complete national endangered species conservation framework must be able to address all living non-domestic organisms native to Canada.

Required Elements of National Approach to Endangered Species Conservation

1. Emphasis must be placed on preventing species from becoming threatened or endangered as a result of human activities by appropriate application of sustainable development and ecosystem management concepts.
2. Assessments and listings of species considered to be at risk at the national level must be undertaken by an independent, scientific body through an open and arms-length process.
3. Species listed as nationally threatened or endangered will be so designated in all range jurisdictions. * Additionally, provinces and territories will designate threatened and endangered species of provincial concern.
4. Aboriginal people of Canada have a special role to play in the listing and recovery of endangered species, and in the provision and use of traditional knowledge in this process.

Responsible

* "Range jurisdictions" means those governments within whose territory/jurisdiction a species may occur, and includes the federal government respecting federal lands and oceans.

5. All jurisdictions (federal and provincial/territorial) will have an agreed set of minimum legislative and regulatory response capabilities.
6. The primary responsibility for determining the nature of response strategies, recovery planning, implementation and enforcement lies with range jurisdictions.
7. Upon listing, range jurisdictions will have 12 months to decide and advise on their recovery responses, including consideration of the need for regulatory responses.
8. The status of endangered and threatened species will be assessed and designated based on best available science, and recovery actions and management will be undertaken using ecosystem management approaches and best available technology and information.
9. Endangered species conservation initiatives should include all major partners, and be undertaken on a "joint venture" basis.

Strategies

1. Emphasis will be placed on preventing species from becoming threatened or endangered as a consequence of human activities. All jurisdictions will:
 - Manage ecosystems using principles of sustainable development, thereby preventing endangerment.
 - Encourage sustainable use of species and ecosystems to foster their conservation.
 - Incorporate biodiversity goals in the management of landscapes and resources, and in design and implementation of regional ecosystem

flagship programs (e.g., Great Lakes Action Plan).

2. Endangered species conservation will be addressed in a national framework which recognizes both national and regional responsibilities and levels of interest. All jurisdictions will:
 - Establish the authority to list their flora and fauna as nationally or provincially/territorially threatened or endangered;
 - Establish the agreed set of prohibitions and authorities, and the ability to select, for each species listed, the prohibitions/authorities the jurisdiction decides to apply (Appendix A).
3. Use an independent, open and transparent, science-based process in the assessment and listing of nationally threatened and endangered species.
 - Establish an assessment and designation Committee of scientific experts who can objectively evaluate status reports and scientific information. (Suggestion made that this Committee be called COSEWIC so that the well recognized and apt name remains in use, although obviously with a different function.)
 - a) Committee members acceptable to jurisdictions.
 - b) The Committee will report to the the ministers responsible for wild species management in Canada.
 - c) Environment Canada will maintain a secretariat to support the activities of the Committee.
 - Develop criteria for assessing whether species should be listed as nationally endangered, and nationally threatened.

- Environment Canada will support the operation of the Committee and supporting mechanisms.
 - Species not of national concern but which may be of regional concern will be referred to appropriate provincial/territorial committees.
4. All range jurisdictions will list nationally designated species and prepare a response including regulatory action within one year of listing.
- Ensure preparation of recovery plans within a specified period of time.
 - Range jurisdictions will participate with other affected range jurisdictions in preparation of recovery plans for any species designated as nationally threatened or endangered.
 - Recovery plans must be realistic, do-able, and reflect best faith efforts to implement.
 - To the degree possible, recovery should be undertaken within an ecosystem or ecozone approach.
 - Multi-species recovery efforts should be given precedence over single species approaches.
 - Recovery initiatives should be incorporated into regional ecosystem management regimes such as regional flagship programs (e.g., Great Lakes Action Plan).
5. Provinces/territories will also assess, designate and develop recovery plans for species, sub-species or populations at the provincial/local level. (The federal government may also make such assessments for subspecies or populations of species over which it has direct jurisdictional responsibility.)

Part Three:

Implementation Considerations

This part of the document describes how the proposed national approach, set out in part one, could be put into practice.

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1. Establishment of an Independent National Assessment Process for Species at Risk

COSEWIC should be an independent body of scientists responsible for monitoring the Canadian biota and designating species at risk. It should report to the ministers responsible for wild species management in Canada.

Structure

COSEWIC members should be competent scientists with demonstrated knowledge of conservation biology and wildlife management. They need not necessarily be experts in taxonomy and systematics, as they can draw on the expertise of taxonomists when it is needed.

The committee could consist of 5 to 9 appointed members, with the chairperson to be elected by the members. The Director of the Secretariat should serve as secretary and non-voting member.

Meetings

COSEWIC should meet two to three times per year. A budget to cover its operations should be provided by the federal government.

Responsibilities

COSEWIC should:

1. Develop terms of reference and operating procedures to be approved by Ministers.
2. Develop and maintain a procedure for monitoring the presence and general condition of Canadian species and identifying those which appear to be declining and are therefore candidates for detailed status determination. This procedure should relate closely with jurisdictional assessment procedures.

3. Have status reports prepared for candidate species identified in step 2 above. Status reports will normally provide the information used to assess the extent of risk. When they are commissioned, priority will be given to those species that appear to be most at risk. If a species' predicament appears to be deteriorating rapidly, COSEWIC may make a temporary emergency designation before a status report is prepared.
4. Consider suggestions for candidate species for status reports or emergency designation from any credible source.
5. Designate species in risk categories according to the available evidence and report the designations to the ministers responsible for wild species management in Canada and to the public. A national list of species at risk would be published annually by the ministers responsible for wild species management in Canada.
6. Conduct formal public consultations during the designation process to help ensure that all relevant scientific information is obtained and carefully considered.
7. Direct the activities of the Secretariat.
8. Report annually to the ministers responsible for wild species management in Canada.

2. Establishing a Category-of-risk System for Use in Canada

The world's species at risk have been designated by authorities operating at the international, national, and provincial levels. These authorities have usually acted independently and used different methods. Often, the lists they create are not equivalent. The resulting confu-

sion hinders conservation efforts. One solution is to use a single system of category names and listing criteria.

Accordingly, it would be advantageous for Canada to model its system (national and locally) for categorizing species at risk on the prevailing international system. This is the system adopted by the International Union for the Conservation of Nature and Natural Resources (IUCN) in November, 1994, to compile its well-known "Red List" of species at risk. (Canada is a member of IUCN.)

Species occurring partly in Canada that appear on the IUCN Red List should automatically be placed on Canada's national list, as a means of contributing to international programs to preserve species diversity.

Proposed Definitions for Categories of Risk in Canada

Extinct: A Canadian species is extinct when there is no reasonable doubt that the world's last individual of the species has died.

Extinct in Canada: A Canadian species is Extinct in Canada when there is no longer a self-sustaining Canadian population in the wild but the species persists in the wild in another country.

Critically Endangered: A Canadian species is Critically Endangered when it is facing an extremely high risk of extinction in the wild in the immediate future.

Endangered: A Canadian species is Endangered when it is facing a high risk of extinction in the wild in the near future, but is not Critically Endangered. (This and the

above definition are included in COSEWIC's current definition of "endangered".)

Vulnerable: A Canadian species is Vulnerable when it is facing a high risk of extinction in the wild in the medium-term future. (This definition is similar to COSEWIC's current definition of "threatened".)

Not at Risk: A Canadian species is Not at Risk when available information allows it to be evaluated and indicates that the species is not Critically Endangered, Endangered, or Vulnerable.

Data Deficient: A Canadian species is Data Deficient when an evaluation was determined to contain insufficient information upon which to make a listing.

The above categories should be applied at the national and sub-national (ie., jurisdictional) levels. The proposed national framework specifies that there be a *national* assessment of species at risk, and separate *jurisdictional* assessments. The national assessment should be directed at those species whose survival and restoration can best be addressed through collective national effort. The jurisdictional assessments should feature those species, subspecies, and sub-populations whose needs can be sufficiently met at the regional or local level.

The following are examples of guidelines that could be used to select the species eligible for the national assessment.

1. The species should be recognized by most taxonomists as a valid entity known to have occurred in

the wild in Canada for at least the last 50 years. Species that appear occasionally as accidental or casual visitors should not be considered.

2. The species should have a geographical occurrence in Canada beyond only a very small area along Canada's southern border with the United States, unless it is:
 - a) determined to be at risk *outside* Canada by the IUCN, COSEWIC or another reputable authority; or
 - b) a migratory species requiring international co-operative management to ensure its survival.
3. The species must, by virtue of its biological status in Canada, qualify for one of the risk categories or designations adopted by COSEWIC.

3. Establishing Guidelines for Assessing Risk

Estimating a species' proximity to extinction has always been a subjective exercise. During its 18 years of operation, COSEWIC has been faced with making decisions that must consider many factors – size of population, extent of occurrence, condition of habitat, potency of threats, etc. – when complete and accurate information was often lacking. In these circumstances, other authorities may not have reached the same conclusions, and the actual risk of extinction may not have been accurately estimated.

Fortunately, conservation biologists are developing methods to improve the accuracy of estimating a species' risk of extinction. Based on population biology theory developed from observations of declining populations, these methods use a combination of qualitative and quantitative criteria to define risk categories in terms of the probability of extinction within specified time periods. They have been shown to be appropriate

for most large vertebrates at least. Two international authorities, IUCN and the Convention on International Trade in Endangered Species (CITES) and several nations have recently adopted these designation methods, and they will undoubtedly gain increasing acceptance.

Canada could adopt a similar guideline system. It would offer several scientific advantages; more consistent application by different people, improved accuracy in estimating when extinction might occur, and easier comparison of the status of widely different groups of species. There is a further bonus; people using lists of species at risk can get a better idea of how and why individual species were listed. Appendix B on guidelines and definitions for assigning species to risk categories is modelled after the IUCN guidelines.

**4. Establishing a National Response
to Species Placed in National Categories of Risk**

The first response after a species has been assigned by COSEWIC to one of the national risk categories should be the legal scheduling of the species on the national list of species at risk.

When a species first appears on the national list, the jurisdiction(s) responsible for managing it or its habitat should immediately schedule it as “at risk” nationally on their separate lists. Range jurisdictions would then have a year to submit an endangered species management plan. This plan would be required for all species listed as Extinct in Canada, Critically Endangered, Endangered, or Vulnerable in Canada.

National management plans should outline actions, including prohibitions and authorities which the jurisdictions actually plan to undertake and for which funds have been secured. It can vary from a de-

tailed, long-term management plan to a short statement of work to be completed over the next year. If the jurisdictions determine for some reason that no management action is warranted on its part, the plan should explain and justify that decision.

RENEW should report annually to ministers on national progress, and help coordinate inter-jurisdictional activities.

Besides the national response described above, each government will maintain its own jurisdictional lists for the species that fall under its legal responsibility. There would be a federal list and one for each province and territory. COSEWIC will provide information on species that do not qualify for the national list to the appropriate jurisdiction(s) for consideration, especially when there are sub-populations that appear to be in trouble.

Each of these jurisdictional lists should include any species on the national list that occur under that jurisdiction. In addition, it should include all species and populations believed to be at risk within that jurisdiction. Almost half of the entries in COSEWIC's current extirpated, endangered, and threatened categories would become candidates for the jurisdictional lists, because they represent subspecies or populations.

The resulting set of national and jurisdictional lists will present comprehensive information on biodiversity at risk in Canada. Unlike the present situation, all lists will have a basis in law. This should help ensure that all representatives of species at risk, from national populations to local sub-populations, will be identified and considered for protection.

5. Establishing a Minimum Set of Regulations That All Jurisdictions Would Employ to Protect and Restore Species Considered Nationally at Risk

The requirement that each jurisdiction establish a minimum set of laws and regulations to adequately protect and, where feasible, restore species at risk is a key tenet of the proposed national approach. Each jurisdiction will have the capability to do the following:

- A. List those species that appear as critically endangered, endangered or vulnerable on the national list.
- B. Individually, or with other affected range jurisdictions, prepare a restoration plan for any species designated in (A) above within one year of listing. Plans will set out the specific actions the agency commits to undertake.
- C. Have the legislative or regulatory capacity to include any or all of 10 options that may be specified by a recovery plan, as described in Appendix A, Illustration of Agreed Set of Prohibitions and Authorities.

6. Conclusion

All levels of government and private conservation organizations have paid increasing attention to species at risk, and have created programs to prevent the loss of species. Threats to wildlife and their habitat are increasing and present new challenges.

Federal, provincial and territorial government wildlife officials have prepared a National Approach to Endangered Species Conservation in Canada that would address species in all taxonomic groups. The process for identifying those at risk would be more

objective and open to public participation. Species found to be in trouble would become the subject of cooperative inter-governmental attention. Species and populations of local concern would be addressed by the appropriate jurisdiction.

The next part of this document, part four, invites public comments on the proposed national approach. Such comments will be reflected in a final document for the consideration of responsible government ministers.

Some examples of how various species or sub-populations now on the COSEWIC list might be dealt with under the proposed assessment framework follow:

●
The endangered Vancouver Island marmot, with a very small population confined to Vancouver Island, would appear on the national list and on British Columbia's list.

●
The whooping crane, an endangered migratory bird that visits several prairie provinces and the NWT, would appear on the national list, on the federal list, and on the relevant provincial and territorial lists.

●
An endangered beluga sub-population (or stock) might appear on the federal list, but not on the national list because the species as a whole is not at risk in Canada.

●
The endangered Gaspésie woodland caribou sub-population might appear on the Quebec list, but not on the national list because the species is not at risk in Canada. Similarly, the endangered and threatened Peary caribou sub-populations would appear only on the NWT's list.

Appendix A: Illustration of Agreed Set of Prohibitions and Authorities

For any nationally endangered/threatened species listing made by a range jurisdiction, the jurisdiction will select which prohibitions, or authorities, if any, it wishes to apply.

1. Prohibit any person from killing, injuring, taking, interfering, disturbing, the specified plant or animal except as authorized.
2. Prohibit any person from possessing the specified plant or animal except as authorized.
3. Prohibit any person from trafficking the specified plant or animal except as authorized.
4. Provide the authority to define critical habitats on Crown land and prohibit any activity that adversely affects the specified plant or animal species in the defined area.
5. Provide the authority to define critical habitats on private land and prohibit any activity that adversely affects the specified plant or animal species in the defined area.
6. Provide emergency authority to the Minister to amend, modify or suspend any activity on defined Crown land which he believes would adversely affect a specified plant or animal species for up to one year, while a restoration plan is being prepared.
7. Provide authority for local governments (municipalities) to define land uses through zoning that are compatible with endangered/threatened plant and animal species needs.
8. Provide for similar maximum penalties for offenses respecting National endangered/threatened species.

9. Require that all government departments and agencies shall act in a manner that protects and restores the specified plant or animal species in the designated Crown land area of concern.
10. Require that all government departments and agencies shall act in a manner that protects and restores the specified plant or animal species in the designated private land area of concern.

Appendix B:
**Examples of Guidelines for Critically Endangered,
Endangered, and Vulnerable Species**
(Based on IUCN Version 2.3)

Note: These guidelines should be applied using the definitions and cautions provided. They are meant to help guide decision-making only and should not be regarded as absolute thresholds. It is not expected that they will be suitable for all species and under all circumstances. The guidelines have been shown to be reasonably applicable to terrestrial vertebrates and to many plants; better guidelines may be needed for other life forms.

Critically Endangered

A Canadian species is *Critically Endangered* when it is facing an extremely high risk of extinction in the immediate future as indicated by any of the following:

- A) A numerical decline of at least 80% in 10 years or 3 generations, whichever is longer, with the last observation made no more than 3 years prior to designation, based on any of the following:
 - 1) direct counts and statistically based estimates of number of mature individuals
 - 2) indices denoting trend in number of mature individuals

- 3) decline in area of occupancy
- B) Extent of occurrence estimated to be less than 100 km² or area of occupancy estimated to be less than 10 km², and estimates indicating any two of the following:
 - 1) Canadian populations fragmented to the extent that it entails increased extinction risk or found in a single location.
 - 2) Continuing decline, not part of a natural cycle or fluctuation, in number of mature individuals or sub-populations, area of occupancy or distribution, or suitability of habitat.
 - 3) Fluctuations in numbers of mature individuals greater than about one order of magnitude.
- C) Canadian population estimated to number less than 250 mature individuals and either:
 - 1) Decline of at least 25% over 3 years or one generation, whichever is longer, with the last observation made no more than 3 years prior to listing, or
 - 2) Continuing decline, not part of a natural cycle or fluctuations, in number of mature individuals and either:
 - a) Fragmentation such that no sub-population exceeds 50 mature individuals, or
 - b) All individuals in a single sub-population.
- D) Canadian population estimated at less than 50 mature individuals.

Endangered

A Canadian species is Endangered when it is facing a high risk of extinction in the near future, and indicated by any of the following:

- A) A numerical decline of at least 50% in 10 years or 3 generations, whichever is longer, with the last

observation made no more than 3 years prior to designation, based on any of the following:

- 1) direct counts and statistically based estimates of number of mature individuals,
- 2) indices denoting trend in number of mature individuals,
- 3) decline in area of occupancy.

B) Extent of occurrence estimated to be less than 5000 km² or area of occupancy estimated to be less than 500 km², and estimates indicating any two of the following:

- 1) Canadian population fragmented to the extent that it entails increased extinction risk or found in fewer than 5 locations.
- 2) Continuing decline, with the last observation made no more than 3 years prior to designation, not part of a natural cycle or fluctuation in number of mature individuals or sub-populations, area of occupancy or distribution, or suitability of habitat.
- 3) Fluctuations in numbers of mature individuals greater than about one order of magnitude.

C) Canadian population estimated to number less than 2500 mature individuals and either:

- 1) Decline of at least 20% over 5 years or 2 generations, whichever is longer, with the last observation made no more than 3 years prior to listing, or
- 2) Continuing decline, not part of a natural cycle or fluctuations, in number of mature individuals and either:

a) Fragmentation such that no sub-population exceeds 250 mature individuals, or

b) All individuals in a single sub-population.

D) Canadian population estimated at less than 250 mature individuals.

Vulnerable

A Canadian species is Vulnerable when it is facing a high risk of extinction in the medium-term future as indicated by any of the following:

- A) A numerical decline of at least 50% in 20 years or 5 generations, whichever is longer, with the last observation made no more than 3 years prior to designation, based on any of the following:
 - 1) direct counts and statistically based estimates of number of mature individuals,
 - 2) indices denoting trend in number of mature individuals,
 - 3) decline in area of occupancy.
- B) Extent of occurrence estimated to be less than 20,000 km² or area of occupancy estimated to be less than 2000 km², and estimates indicating any two of the following:
 - 1) Canadian populations fragmented to the extent that it entails increased extinction risk or found in fewer than 10 locations.
 - 2) Continuing decline, not part of a natural cycle or fluctuation, in number of mature individuals or sub-populations, area of occupancy or distribution, or suitability of habitat.
 - 3) Fluctuations in numbers of mature individuals greater than about one order of magnitude.
- C) Canadian population estimated to number less than 10,000 mature individuals and either:
 - 1) Decline of at least 20% over 5 years or 2 generations, whichever is longer, with the last observation made no more than 3 years prior to listing, or
 - 2) Continuing decline, not part of a natural cycle or fluctuations, in number of mature individuals and either:

- a) Fragmentation such that no sub-population exceeds 1000 mature individuals, or
 - b) All individuals in a single sub-population.
- D) Canadian population estimated at less than 1000 mature individuals or restricted to an area less than 100 km².

DEFINITIONS

Population and Sub-Populations: A population is the number of mature individuals of the species in Canada. Sub-populations are distinct groups among which there is little exchange, typically less than one successful migrant or gamete per year.

Mature Individuals: Mature individuals are those likely to attempt reproduction.

Generation: A generation is the average age of parents.

Extent of Occurrence: The area contained within the shortest continuous line drawn to encompass all occurrences of the species in Canada is the extent of occurrence. This measure excludes vagrant individuals and the area between highly disjunct populations.

Area of Occupancy: The smallest area of occupancy during critical periods of the life cycle is the area of occupancy. For example, the extent of occurrence of Vancouver Island marmots covers much of west-central Vancouver Island (hundreds of km²) whereas the area of occupancy of known colonies encompasses less than 1 km².

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Scientific Uncertainty and the Use of Inference and

Projection: In general, scientific uncertainty should not be used as a reason not to act in the best interest of the conservation of the species. In cases when high quality scientific data are not available for a candidate species, methods involving estimation, inference and projection are acceptable. The effect of current or potential threats may be extrapolated into the future, as long as it can reasonably be supported. If estimates about the status of a species vary, it is appropriate to choose the one that leads to listing in the highest risk category as a precaution.

Part Four:

Consultation Workbook

(Your comments are requested.)

The first three parts of this document have described the measures that Canadian governments are considering as A National Approach to Endangered Species Conservation in Canada. Your comments are invited on the proposed national approach. You may express your views at one of the public consultation workshops which will be held in cities across Canada.

If it is not possible for you to attend one of these workshops, you can express your views by answering the following questions and sending your answers, or other written comments about endangered species conservation, to the address indicated. The question pages can be removed from the booklet by cutting along the dotted line.

Your Comments on the Proposed National Approach

1. Have all the essential elements been identified in the proposed national approach (Part Two of this document, pages 3–9)?

2. The Listing Process

In your opinion, is the proposed assessment process satisfactory? How could it be improved?

Should the criteria be the same for all governments? Should the assessments be based on international standards? (See Part Three, page 13.)

3. Response Actions

If a species is listed as critically endangered, endangered or vulnerable, what action should result? How can the proposed measures be improved? (See Part Three, Section 4, page 16.)

4. Recovery Plans

Listing of a species as critically endangered, endangered or vulnerable, often leads to the preparation of a recovery plan to restore the species to a healthy level. Under what circumstances should the recovery of a species be considered not feasible?

5. Habitat Management

How should endangered species be managed on private lands? ... on crown lands? ... on treaty lands? ... in Canadian waters?

This image shows a single sheet of white paper with horizontal blue or grey ruling lines. The lines are evenly spaced and run across the width of the page. There are approximately 20 lines visible. The paper appears to be a standard notebook page.

6. Species of Concern

Under what circumstances should a species be considered of national concern? ... regional concern? ... local concern?

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7. Legislation

In your opinion, what are the essential elements of law that every agency should have in place? (Appendix A.)

8. What other means would you suggest to improve endangered species conservation in Canada? ... for the federal government? ... for the provincial or territorial government? ... for industry? ... for the public?

Please use additional sheets of paper if you need more space to express your views.

If you would like to receive a report on the public consultations on endangered species conservation, please print your name and address below:

Name _____

Address _____

City _____

Prov./Terr. _____ Postal Code _____

If it is not possible for you to attend one of these workshops, you can express your views by sending your answers, or other written comments about endangered species conservation, to the following address. The question pages can be removed from the booklet by cutting along the dotted line.

Send your answers, or other written comments, to:

Endangered Species
Environment Canada
Ottawa, Ontario
K1A 0H3

Please respond by May 15, 1995.

If you are a computer user, your comments can be sent through the internet to:

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