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CHANGES IN THE STATUS OF WILDLIFE SPECIES AT RISK

CANADIAN ENVIRONMENTAL SUSTAINABILITY INDICATORS

Canada

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CANADIAN ENVIRONMENTAL SUSTAINABILITY INDICATORS

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January 2026

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Changes in the status of wildlife species at risk

Biodiversity supports vital ecological processes and provides a wide range of resources. It is important to conserve biodiversity to prevent the extinction of wildlife species and ecosystem loss. Wildlife species are essential to the integrity of ecosystems. However, some species are at risk of disappearing from Canada. Wildlife species that are thought to be at risk are periodically assessed.

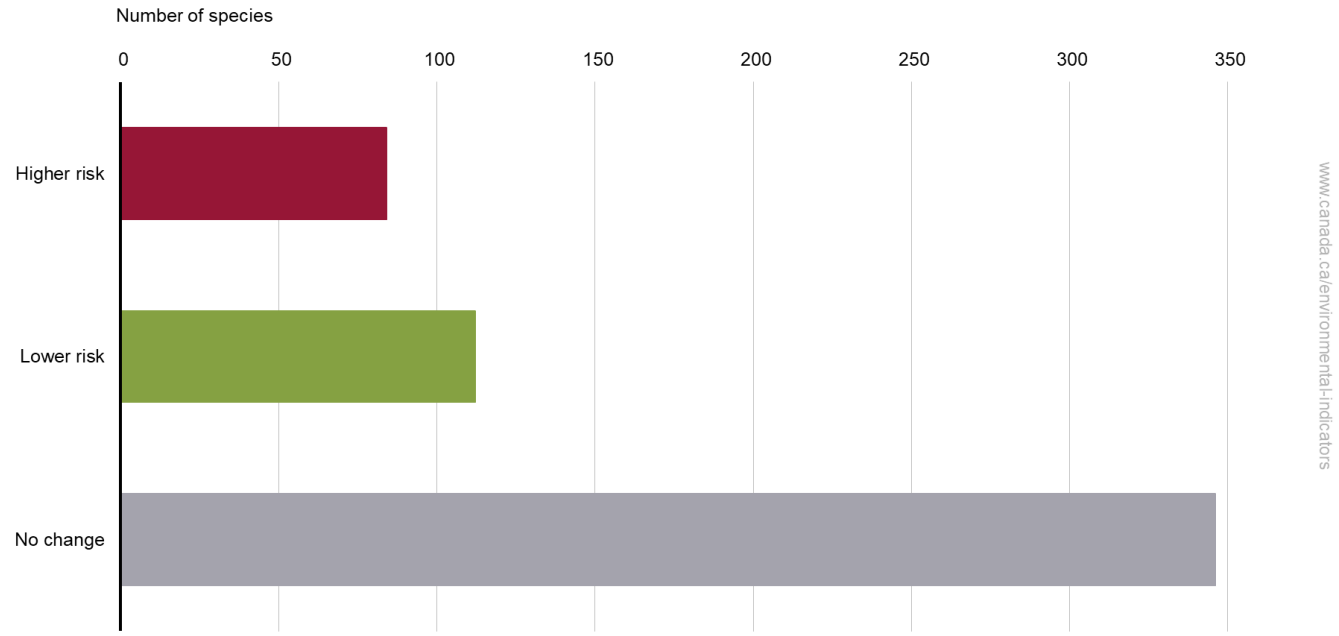
This indicator reports on changes in the status of wildlife species at risk when they are reassessed. Changes in status over time may help determine whether conditions for these species are improving or worsening and what management actions can be taken.

Key results

The Committee on the Status of Endangered Wildlife in Canada started their assessments of wildlife species at risk in 1978. Species are reassessed when sufficient data becomes available to determine whether there was a change in status. Since 1978, 542 species have been reassessed and of those,

- 84 wildlife species (15%) are now in a higher risk category
- 112 wildlife species (21%) are now in a lower risk category
- 346 wildlife species (64%) show no change in status

Figure 1. Changes in the risk of disappearance of wildlife species from Canada, 1978 to May 2025



Data for Figure 1

Note: In this analysis, wildlife species refers to a species, subspecies[1] or a genetically or geographically distinct population. Wildlife species disappearance may refer to extinction or extirpation (an extirpated species no longer occurs in the wild in Canada). Lower risk consists of species reassessed as no longer at risk as well as species in a lower risk category compared to the previous assessment.
Source: Committee on the Status of Endangered Wildlife in Canada (May 2025).

[1] Populations of the same wildlife species geographically separated that have developed genetic and morphological differences.

Monitoring wildlife species[2] is important in order to determine their status, including if they are at risk. Conservation actions are often required to prevent the disappearance of species at risk from Canada.

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assesses wildlife species that may be at risk and places them in a risk category. If conservation actions are effective, the risk level will generally decrease over time. Nonetheless, depending on the life cycle of the species and the condition of its habitat, recovery may take decades. In addition, some wildlife species are naturally rare in Canada and are expected to remain at some level of risk.

Changes in risk level can be a result of improved information rather than actual changes in the condition of the wildlife species. This is more likely to occur for species that have improved in status than for species that have declined.[3]

Most wildlife species remain in the same category when they are reassessed. The changes that are observed most often occur between neighbouring categories.

In December 2024 and May 2025, 14 wildlife species were reassessed, of which 8 had no change in their status. Of the 6 species that had a change in status, 3 were classified to a higher risk category and 3 were classified to a lower risk category.

Higher risk:

- The bull trout – Pacific population changed in status from not at risk to special concern as a result of increasing threats that include road development from forestry and mining activities, increases in water temperature, drought, fishing mortality and pollution
- The pugnose minnow changed in status from threatened to endangered because, over the past 10 years, it has only been found at 1 of the 10 locations where it was previously known to occur
- The snowy owl changed in status from not at risk to threatened as a result of improved population estimation techniques which have revised the population size downward

Lower risk:

- The Butler's gartersnake changed in status from endangered to threatened due to a change in the application or interpretation of assessment criteria
- The least bittern changed in status from threatened to special concern as a result of improved monitoring indicating that the Canadian population is currently stable
- The lilliput changed in status from endangered to special concern as there was no evidence for a decreasing trend in abundance due to additional subpopulations being discovered

About the indicator

What the indicator measures

The Changes in the status of wildlife species at risk indicator reports on changes in wildlife species designations for species assessed by the Committee on the Status of Endangered Wildlife in Canada (COSEWIC). The COSEWIC is composed of independent experts who determine the national status of Canadian wildlife species, subspecies,[4] varieties[5] or other designatable units that are suspected of being at risk of extinction or extirpation.

[2] A species, subspecies, variety or geographically or genetically distinct population of animal, plant or other organism, other than a bacterium or virus, that is wild by nature and is either native to Canada or has extended its range into Canada without human intervention and has been present in Canada for at least 50 years.

[3] Moore A, Cyr A, Findlay S (2016) Do changes in COSEWIC status reflect changes in species' biological status. Report to the Committee on the Status of Endangered Wildlife in Canada (COSEWIC), 10pp.

[4] Populations of the same wildlife species geographically separated that have developed genetic and morphological differences.

[5] Populations of plant organisms of the same wildlife species with a common set of characteristics.

Why this indicator is important

Recognition that a wildlife species is at risk of extinction or extirpation can focus management action. Successful management should reduce the risk of species loss. The conservation of wildlife species at risk is a key component of Canada's Nature Strategy, which aims to conserve biological diversity in Canada.[6] The conservation of such species is also the goal of the *Species at Risk Act*, which provides legal protection to prevent the extinction of wildlife species and secure the necessary actions for their recovery.

Ecosystems are composed of a variety of animals, plants and other organisms, each of which performs a specialized role. This diversity of life supports vital ecological processes and provides a wide range of resources known as ecological goods and services, such as pest management, oxygen production and water purification. The loss of species has detrimental impacts on ecosystems and the goods and services they provide.

Related initiatives

The indicator contributes to the Sustainable Development Goals of the 2030 Agenda for Sustainable Development. It is linked to Goal 15, Life on Land and Target 15.5, "Take urgent and significant action to reduce the degradation of natural habitats, halt the loss of biodiversity and, by 2020, protect and prevent the extinction of threatened species."

The indicator also contributes to the Kunming-Montreal Global Biodiversity Framework. It is linked to Target 4: "Ensure urgent management actions, to halt human induced extinction of known threatened species and for the recovery and conservation of species, in particular threatened species, to significantly reduce extinction risk, as well as to maintain and restore the genetic diversity within and between populations of native, wild and domesticated species to maintain their adaptive potential, including through *in situ* and *ex situ* conservation and sustainable management practices, and effectively manage human-wildlife interactions to minimize human-wildlife conflict for coexistence."

Related indicators

The Species at risk population trends indicator shows whether population and distribution trends of species at risk that are listed under the *Species at Risk Act* are consistent with recovery or management objectives.

The General status of wild species indicator reports extinction risks across a broad set of species and can reveal early signs of trouble before species reach a critical condition.

The Canadian species index indicator tracks average population trends for vertebrate species in Canada and is a good proxy measure of overall biodiversity trends.

Data sources and methods

Data sources

Data are from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) database on wildlife species at risk. Individual species status reports are available in the Species at risk public registry.

More information

The COSEWIC meets twice a year to consider wildlife species reports, assess wildlife species' risk of extinction or extirpation, and designate a status category. The COSEWIC Secretariat maintains a database of the assessment results, which were summarized for this indicator. Documents related to species of interest can be found on the Species at Risk Public Registry. In general, wildlife species are reassessed every 10 years, or sooner if there is reason to believe there is a significant change in their status. The date of reassessment therefore varies widely within the dataset.

[6] Government of Canada (2014) Protection of species at risk: federal, provincial and territorial accord. Retrieved on October 6, 2025.

Wildlife species are assigned to 1 of 7 status categories: extinct, extirpated, endangered, threatened, special concern, not at risk or data deficient. As of May 2025, a total of 1,151 species had been assigned a status.

Table 1. Number of species by status category, Canada, 1978 to May 2025

Status category	Number of species
Extinct	25
Extirpated	22
Endangered	378
Threatened	201
Special concern	263
Not at risk	200
Data deficient	62
Total	**1,151**

Methods

Wildlife species are assigned a status change based on their previous status. This indicator uses the set of species that have been reassessed by the COSEWIC and have not been designated as data deficient in either of the last 2 assessments (542 species).

More information

Wildlife species assessment

COSEWIC is a committee of independent experts that assesses wildlife species that may be at risk of disappearing from Canada.

The assessment process is divided into 3 sequential steps:

1. selection of wildlife species requiring assessment to create the prioritized candidate wildlife species list
2. compilation of available data, knowledge and information to produce status reports
3. assessment of a wildlife species' risk of extinction or extirpation and corresponding designation (status category)

In general, wildlife species are reassessed every 10 years. If information received suggests that a species should be reassessed sooner, COSEWIC may do so.

Indicator calculation

In its assessments, COSEWIC notes a status change. Wildlife species that have been assessed only once are given the change status of new. For reassessed species, there are 6 possible change status categories: no change, in a higher risk category, in a lower risk category, no longer at risk, changed, and reassigned. The change status for reassessed species is based on the 2 most recent assessments.

The indicator includes wildlife species that have been reassessed and for which it is possible to assess the change in risk. Therefore, of the 1,151 wildlife species with an assigned status, the indicator excludes 609 species:

- that have been assessed only once and have a change status designation of new (490 species)
- that are data deficient in either their most recent or previous assessment and have a change status designation of changed (that is, wildlife species moved to the data deficient category from a risk category or to a risk category from the data deficient category) (25 species)
- with a status change designation of reassigned (89 species), which is used in cases where the unit being assessed has changed based on new information, for example a species that is split into subspecies or geographical units

- that are data deficient in both recent assessments, which are assigned a change status designation of no change (5 species)

Table 2. Relationship between change status and indicator category

Committee on the Status of Endangered Wildlife in Canada change status	Definition	Changes in wildlife species' disappearance risk category
New	Wildlife species examined for the first time	Excluded from the indicator
Changed	Wildlife species moved to the data deficient category from a risk category or to a risk category from the data deficient category	Excluded from the indicator
No change	Wildlife species stays in the same category after reassessment	No change[A]
In a higher risk category	Wildlife species placed in a higher risk category after reassessment	Higher risk
In a lower risk category	Wildlife species placed in a lower risk category after reassessment	Lower risk
No longer at risk	Wildlife species moved to the not at risk category from a risk category	Lower risk
Reassigned	Wildlife species that has been assigned to a different designatable unit	Excluded from the indicator

Note: [A] Wildlife species with a change designation of "no change" and that are data deficient on both dates when an assessment was made are excluded from the indicator.

Caveats and limitations

Species at risk may take a long time to recover, and some wildlife species are naturally rare in Canada. A change in status may occur only after significant biological change (for example, increases in abundance, population size or geographical range) has been detected. For these reasons, relatively few species should be expected to show changes in risk level when reassessed. Nonetheless, if management efforts are successful, we should expect to see more improvements than declines over time.

Wildlife species at risk are reassessed approximately every 10 years and only a portion of assessed species are considered in this indicator. As such, comparisons between years should be made with caution.

More information

Changes in risk level can be a result of improved information rather than actual changes in the condition of the wildlife species. Many species that show decreased risk are reclassified due to new information, rather than biological change. Changes in knowledge often involve the detection of additional populations, with the result that species are less at risk of extinction than previously believed. Changes due to new knowledge can happen quickly, while biological changes need time. Wildlife species that are at risk can take a long time to recover, especially if they are long-lived and slow to reproduce. Also, in some cases, recovery depends on improvements to habitat which may take many decades.

Some species may change risk level due to changes in the interpretation of the assessment criteria.

Wildlife species that are naturally rare may be considered to be at risk because they are more vulnerable to threats. The lack of change for these species should not be considered a conservation failure.

Knowledge of which wildlife species may be at risk is far from complete, and only a portion of those suspected to be at risk can be assessed. The Committee on the Status of Endangered Wildlife in Canada prioritizes assessments based on expert opinion. Early efforts focused mainly on vertebrates and plants,

which are also the better-known species. As a result, these species are over-represented among those that have been reassessed. Similarly, more knowledge has been gathered on wildlife species in southern Canada and in terrestrial habitats.

Resources

References

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Annex

Annex A. Data tables for the figures presented in this document

Table A.1. Data for Figure 1. Changes in the risk of disappearance of wildlife species from Canada, 1978 to May 2025

Wildlife species group	Higher risk (number of species)	No change (number of species)	Lower risk (number of species)
Amphibians	4	13	1
Arthropods	4	25	5
Birds	14	53	21
Echinodermata	0	0	0
Fishes (freshwater)	19	51	9
Fishes (marine)	8	13	6
Lichens	1	5	4
Mammals (marine)	4	26	4
Mammals (terrestrial)	4	28	6
Molluscs	2	21	7
Mosses	0	11	4
Reptiles	4	27	8
Vascular plants	20	73	37
Total	**84**	**346**	**112**

Note: In this analysis, wildlife species refers to a species, subspecies[7] or a genetically or geographically distinct population. This detailed view shows the changes in status categories for wildlife species at risk from the previous assessment to the most recent assessment. The assessments are from various years up to May 2025.
Source: Committee on the Status of Endangered Wildlife in Canada (May 2025).

[7] Populations of the same species geographically separated that have developed genetic and morphological differences.

Table A.2. Supplementary data for Figure 1. Changes in the risk of disappearance of wildlife species from Canada, 1978 to May 2025

Committee on the Status of Endangered Wildlife in Canada status categories	Extinct, latest assessment (number of species)	Extirpated, latest assessment (number of species)	Endangered, latest assessment (number of species)	Threatened, latest assessment (number of species)	Special concern, latest assessment (number of species)	Not at risk, latest assessment (number of species)	Total, previous assessment (number of species)
Extinct, previous assessment	11	0	0	0	0	0	**11**
Extirpated, previous assessment	2	19	0	0	0	0	**21**
Endangered, previous assessment	3	1	154	24	14	0	**196**
Threatened, previous assessment	0	0	37	57	42	6	**142**
Special concern, previous assessment	0	0	13	21	93	26	**153**
Not at risk, previous assessment	0	0	0	1	6	12	**19**
Total, latest assessment	**16**	**20**	**204**	**103**	**155**	**44**	**542**

Note: In this analysis, wildlife species refers to a species, subspecies[8] or a genetically or geographically distinct population. This detailed view shows the changes in status categories for wildlife species at risk from the previous assessment to the most recent assessment. The assessments are from various years up to May 2025.
Source: Committee on the Status of Endangered Wildlife in Canada (May 2025).

[8] Populations of the same species geographically separated that have developed genetic and morphological differences.

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