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Data Sources and Methods for the Species at Risk Population Trends Indicator

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1 Introduction

The species at risk population trends indicator is a part of the Canadian Environmental Sustainability Indicators (CESI) program, which provides data and information to track Canada's performance on key environmental sustainability issues.

2 Description and rationale of the species at risk populations trends indicator

2.1 Description

The indicator provides an assessment of the recovery trends of species under Environment Canada's jurisdiction that are included on the List of Wildlife Species at Risk (http://www.sararegistry.gc.ca/species/default_e.cfm) under the *Species at Risk Act* (SARA), available from: <http://www.ec.gc.ca/alef-ewe/default.asp?lang=en&n=ED2FFC37-1>) as extirpated,¹ endangered or threatened, that have a final recovery strategy, and that are determined to be biologically and technically feasible to recover.

2.2 Rationale

Species listed on the List of Wildlife Species at Risk under SARA as extirpated (http://www.sararegistry.gc.ca/species/default_e.cfm), endangered or threatened must have recovery strategies prepared as a means to focus management actions. Successful recovery of an extirpated, endangered or threatened species should, depending upon the specifics of the situation, arrest or reverse any unnatural decline / population trend, and remove/mitigate human-induced threats in order to improve or stabilize the likelihood of the species' persistence in the wild. A species will be considered recovered when its long-term persistence in the wild is returned to a normal level (i.e., the level prior to human-induced threats acting upon the species).

It is important to note that the appropriate target level for persistence whereby a species would be considered recovered differs among species and depends on the current and historical context, including factors such as population abundance, the number of populations, and threats.²

3 Data

3.1 Data sources

The data for this indicator have been compiled from two sources. Recovery objectives were drawn from recovery strategies of species listed as extirpated, endangered or threatened on the List of Wildlife Species at Risk under SARA. Final and proposed species recovery strategies³ are made available to the public through the Species at Risk Public Registry (http://www.sararegistry.gc.ca/search/advSearchResults_e.cfm?stype=doc&docID=18). Population trends were extracted from the Committee on the Status of Endangered Wildlife in Canada (COSEWIC) assessments, which are also available through the Registry.

¹ Extirpated means that the species is no longer present in Canada but exists elsewhere.

² Environment Canada (2006) Recovery Guidance Handbook (ROMAN). Available from: http://www.sararegistry.gc.ca/sar/recovery/roman_e.cfm.

³ The Species at Risk Public Registry provides both 'final' and 'proposed' recovery strategies for species at risk in Canada. A recovery strategy is considered 'final' once all consultation and approval processes have been completed.

3.2 Spatial coverage

The indicator has national coverage because it contains all species that have been listed as endangered, threatened or extirpated under SARA within Environment Canada's jurisdiction, regardless of region. However, significant biases in information availability exist. Specifically, species knowledge is greatest in southern Canada, in part because the area is more accessible for studying and is home to the vast majority of listed species.

3.3 Temporal coverage

Environment Canada is required to report progress towards meeting the objectives of a species' recovery strategy every five years. COSEWIC reassesses at-risk species every 10 years, or more often if warranted.

3.4 Data completeness

Data cover only existing information on population trends for species at risk listed on the List of Wildlife Species at Risk (www.sararegistry.gc.ca/species/default_e.cfm) under the SARA that are (1) under Environment Canada jurisdiction, (2) have a final recovery strategy, and (3) have been determined to be biologically and technically feasible to recover.

3.5 Data timeliness

This indicator is current to the end of October 2011.

4 Methods

Species potentially at risk undergo an assessment by COSEWIC, an independent body of experts. COSEWIC completes a species assessment (status report) and ranks species as extinct, extirpated, endangered, threatened, special concern, not at risk or data deficient. COSEWIC re-assesses each species at risk at least once every 10 years, or at any time if it has reason to believe that the status of the species has changed.

COSEWIC assessments are provided to the Minister of the Environment, who recommends which species to add to the List of Wildlife Species at Risk under SARA. Species listed as endangered, threatened or extirpated under SARA must have a recovery strategy prepared by Environment Canada, Parks Canada, or Fisheries and Oceans Canada, as appropriate.

Recovery strategies assess whether recovery is feasible; outline what threats need to be addressed; set goals, objectives and approaches for the species recovery; and identify critical habitat. Recovery strategies are followed by action plans, which outline the activities required to meet the goals of the recovery strategy.

Species recovery strategies must be completed within one year of the species being listed as endangered, and within two years of the species being listed as threatened or extirpated on the List of Wildlife Species at Risk under SARA.

To produce the indicator, recovery objectives were drawn from strategies produced by Environment Canada where recovery was deemed feasible. For these species, a search was made for COSEWIC reassessments produced since the strategy was finalized. Population trends in the COSEWIC reassessments⁴ were then compared to recovery objectives.

⁴ It is important to note that the reassessments took place less than one month to four years after the final recovery strategy was released.

5 Caveats and limitations

Data coverage of species at risk is very narrow compared to the number of wildlife species assessed by COSEWIC as extirpated (24), endangered (281) or threatened (158), or compared to the number of species listed on Schedule 1 of SARA as extirpated (23), endangered (223) or threatened (127).

With time, the number of species with completed recovery strategies will increase, the number of reassessed species will increase, and trends will become more meaningful as populations have sufficient time to respond.

6 References and further reading

6.1 References

Government of Canada (2012) List of Wildlife Species at Risk. Retrieved on 12 March, 2012. Available from: http://www.registrelep.gc.ca/species/schedules_e.cfm?id=1.

Government of Canada (2012) Species at Risk Public Registry. Retrieved on 23 January, 2012. Available from: http://www.sararegistry.gc.ca/default_e.cfm.

Government of Canada (2012) Recovery Guidance Handbook (ROMAN). Retrieved on 23 January, 2012. Available from: http://www.sararegistry.gc.ca/sar/recovery/roman_e.cfm.

Government of Canada (2012) Committee on the Status of Endangered Wildlife in Canada. Retrieved on 23 January, 2012. Available from: http://www.cosewic.gc.ca/eng/sct1/index_e.cfm.

6.2 Further reading

Government of Canada (2012) Species at Risk Act. Retrieved on 23 January, 2012. Available from: http://www.sararegistry.gc.ca/approach/act/default_e.cfm.

Environment Canada (2012) Habitat Stewardship Program. Retrieved on 23 January, 2012. Available from: <http://www.ec.gc.ca/hsp-pih/default.asp?lang=En&n=59BF488F-1>.

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