



Canadian
Down Syndrome
Society

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IUCN Global Species Programme Red List Unit

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To: The IUCN Red List of Threatened Species™

This letter is our formal application for the inclusion of people with Down syndrome as an endangered sub-species or sub-population of *Homo Sapiens* to the IUCN's Red List of Threatened Species.

We have enlisted the services of Adam Chamberlain – Certified as a Specialist in Environmental Law by the Law Society of Ontario – to help us with our application.

THREAT

The existing Down syndrome community is shrinking and with the diminishing population, comes a correlated decrease in access to services such as education, housing, employment, as well as their overall quality of living.

Education¹

- 67% of parents or guardians reported that students in Canada who have an intellectual disability often did not have access to the appropriate curriculum;
- 53% said students in Canada who have a developmental disability did not have the proper academic accommodations to make the curriculum accessible to them;
- 62.7% said students in Canada who have a developmental disability often did not participate in extracurricular school activities;
- 45% said students in Canada who have a developmental disability were excluded from school or the classroom for disability-related reasons.

Housing²

- 20% of Canadians with developmental disabilities face housing and support gaps;
- 15% of Canadians with developmental disabilities experience core housing needs, compared to 11.1% of the rest of the population.

Employment^{3, 4}

- In 2012, two out of three Canadians with a developmental disability were out of the workforce and not looking for a job.
- In 2011, the national employment rate for people with developmental disabilities was 25.5%, compared to 47% for people with other disabilities and 74% for people without disabilities.
- 61.2% of people with developmental disabilities are not in the labour force, compared to 41.9% of people with other disabilities.

Quality of Living^{5, 6}

- People with developmental disabilities are among the poorest people living in Canada: 34.3% rely on social assistance, compared to 8.6% of people with non-intellectual disabilities.
- 20.6% of people with developmental disabilities live below the low-income cut-off compared to 12.5% of people with other disabilities and 10.3% of people without disabilities.
- 22.3% of people with a developmental disability are much more likely than people without disabilities (9.7%) to be living in poverty.
- Among working-age adults with disabilities, the rate of poverty is twice as high when compared with Canadians without disabilities.

RED LIST CRITERIA

After reviewing the IUCN's Red List, we have compiled data to support our application against each of the five listed criteria.

A. Population size reduction.

Significant population reduction has been seen in a number of countries, classifying people with Down syndrome as **Critically Endangered**. Two of the countries with the most noticeable reductions are listed below.

Iceland:

- 1-3 babies with Down syndrome have been born every year from 2004-2013.⁷

Denmark:

- The number of newborns with Down syndrome is falling by an average of **13% annually**. (2004 to 2010).⁸

When looking at the expected number of Down syndrome births compared to the reported number, there has been a marked decrease in a number of countries.

These figures vary between countries:

- In the US there were 30% fewer individuals born with Down syndrome (2007),⁹
- 50% fewer in the Netherlands (2015),¹⁰
- 48% fewer in England and Wales (2008),¹¹
- 55% fewer in Australia (2004),¹²
- 94% fewer in Taiwan (2010),¹³
- 55% fewer in China (2011).¹⁴

B. Geographic range

Our application fulfills the criteria for extent of occurrence (EOO) and area of occupancy (AOO) as outlined below:

In addition to the countries listed above, the geographic range of people with Down syndrome is being impacted, classifying them as **Vulnerable**.

- In terms of quality of habitat and number of locations: it can take people with Down syndrome years to find appropriate housing.¹⁵

C. Small population size and decline

When looking at the expected number of Down syndrome births compared to the reported number, there has been a marked decrease in a number of countries.

These figures vary between countries:

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- 55% fewer in Australia (2004),¹²
- 94% fewer in Taiwan (2010),¹³
- 55% fewer in China (2011).¹⁴

Based on these figures, our application fulfills the criteria of an observed, estimated, projected or inferred continuing decline in all 3 of the following conditions:

- (i) Number of mature individuals in each subpopulation
(ii) % of mature individuals in one subpopulation
- Extremely extreme fluctuations in the number of mature individuals

The significant population reduction would classify people with Down syndrome as **Vulnerable**

D. Very small or restricted population

Due to the declining number of mature individuals in a number of countries based on the very low numbers of absolute births, this would classify people with Down syndrome as **Critically Endangered**.

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E. Quantitative Analysis

To reach our statistical conclusions we used the following data for Iceland.

Over the past 21 years for which we have data (1993-2013) there has been a precipitous decline in Down syndrome births. If we look at 3-year averages throughout the time period, there has been a 233% decrease in the number of births. This would classify people with Down syndrome as **Critically Endangered**.

YEAR	BIRTHS	Avg./3 yrs.
2013	2	
2012	1	2.00
2011	3	
2010	2	
2009	0	1.33
2008	2	
2007	1	
2006	2	2.00
2005	3	
2004	2	
2003	5	4.00
2002	5	
2001	3	
2000	2	2.67
1999	3	
1998	5	
1997	8	5.33
1996	3	
1995	4	
1994	4	4.67
1993	6	
% decline in 3-year birth rate		233%

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WHAT PEOPLE WITH DOWN SYNDROME NEED TO LIVE

As numbers dwindle, the Down syndrome community gets less support.

Education

- Over 65% of students with a developmental disability lack access to proper instruction.¹⁶

Housing

- It can take people with developmental disabilities up to 20 years to find appropriate housing.¹⁷

Employment

- Two out of three Canadians with a developmental disability are out of the workforce.¹⁸
- Canadians with a developmental disability are more than twice as likely to be living in poverty.¹⁹

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