

Risk Assessment

The following risk assessment determines the risk of **Snow Leopard (*Panthera uncia*)** to Tasmania using the Bomford model (2008) and proposes assigned threat categories and import classifications for the species.

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| Species: | Snow Leopard (<i>Panthera uncia</i>) | |
| Date of Assessment: | 29 January 2021 | |
| Literature search type and date: | Species Profile provided https://www.snowleopard.org/snow-leopard-conservation-gets-boost-from-iucn-save-our-species/ - Accessed 29/1/21 https://pdfs.semanticscholar.org/1686/eaf9b1813c51f3e1216bb3e8033992bd4ac8.pdf IUCN - Accessed 29/1/21 https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0218460#:~:text=Snow%20leopard%20was%20found%20more,current%203.20%20million%20km%20. – Accessed 29/1/21, Range contraction of snow leopard (<i>Panthera uncia</i>) Tariq Mahmood, Ayesha Younas, Faraz Akrim, Shaista Andleeb, Abdul Hamid, Muhammad Sajid Nadeem | |
| Factor | Score | |
| A1. Risk posed from individual escapees (0-2) | 1 | <i>The animal can make unprovoked attacks causing moderate injury (requiring medical attention) or severe discomfort but is highly unlikely (few if any records) to cause serious injury (requiring hospitalisation) if unprovoked OR the animal is unlikely to make an unprovoked attack but can cause serious injury (requiring hospitalisation) or fatality if cornered or handled (A1 = 1).</i> |
| A2. Risk to public safety from individual captive animals (0-2) | 0 | <i>Nil or low risk (highly unlikely or not possible) (A2 = 0). Claws? Can't see an individual wishing to come within reach of a snow leopard?</i> |
| Stage A. Risk posed by individual animals (risk that a captive or escape animal would harm people) | Public Safety Risk Score = A1 + A2 = 1 | Public Safety Risk Ranking A ≥ 2, Highly Dangerous A = 1, Moderately Dangerous A = 0, Not Dangerous = Moderately Dangerous |
| B1. Climate match score (1-6) | 1 | Risk assessment group comment: CLIMATCH modelling appears less suitable for this species given that it highlights areas of rangelands/ tropics as suitable matching vs areas of alpine area of Tasmania and the mainland as less suitable. (Note: However, even if a score of up to 3 were placed in this criteria then this |

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| | | would not affect the outcome for this category.) |
| B2. Exotic population established overseas score (0-4) | 0 | No exotic populations have been established (B2 = 0). |
| B3. Overseas range size score (0-2) | 1 | Present range: >1 million km ² 3.2m km ² |
| B4. Taxonomic class score (0-1) | 1 | Mammal |
| Stage B. Likelihood of establishment (risk that a particular species will establish a wild population in Tasmania) | Establishment Risk Score = B1 + B2 + B3 + B4 = 3 | Establishment Risk Ranking B = 11-13, Extreme B = 9-10, High B = 6-8, Moderate B ≤ 5, Low = Low |
| C1. Taxonomic group (0-4) | 2 | Order: Carnivora |
| C2. Overseas range size (0-2) | 1 | Historical range: 10.47 million km ² 10 – 30 million square kilometres (C2 = 1). https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0218460#:~:text=Snow%20leopard%20was%20found%20more,current%203.20%20million%20km2. |
| C3. Diet and feeding (0-3) | 3 | Mammal that is a strict carnivore (eats only animal matter) and arboreal (climbs trees for any reason) (C3 = 3). |
| C4. Competition for native fauna for tree hollows (0-2) | 0 | Does not use tree hollows. |
| C5. Overseas environmental pest status (0-3) | 0 | Never reported as an environmental pest in any country or region (C5 = 0). |
| C6. Climate match to areas with susceptible native species or communities (0-5) | 0 | The species has no grid squares within the highest six climate match classes (i.e. 10 to 5) that overlap the distribution of any susceptible native species or ecological communities (C6 = 0). |
| C7. Overseas primary production (0-3) | 2 | Moderate pest of primary production in any country or region (C7 = 2). Noting that similar species/ size of animals occur in Tasmania. |
| C8. Climate match to susceptible primary production (0-5) | 2 | 37.6 total score. |
| C9. Spread disease (1-2) | 2 | Mammal |
| C10. Harm to property (0-3) | 0 | No CLIMATCH scores applicable. |
| C11. Harm to people (0-5) | 3 | Injuries or harm moderate but unlikely to be fatal and few |

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| | | <i>people at risk</i> |
| Stage C. Consequence of Establishment (risk that an established population would cause harm) | Consequence Risk Score = sum of CI to CII = 15 | Consequence Risk Ranking C > 19, Extreme C = 15-19, High C = 9-14, Moderate C < 9, Low = High |
| ASSIGNED THREAT CATEGORY: | EXTREME SERIOUS MODERATE LOW EXTREME UNTIL PROVEN OTHERWISE | |
| PROPOSED IMPORT CLASSIFICATION: | PROHIBITED IMPORT RESTRICTED TO THOSE LICENCE HOLDERS APPROVED FOR KEEPING SERIOUS THREAT SPECIES IMPORT RESTRICTED TO THOSE LICENCE HOLDERS APPROVED FOR KEEPING MODERATE THREAT SPECIES IMPORT PERMITTED | |

CALCULATING TOTAL COMMODITY DAMAGE SCORE

| Column 1 | Column 2 | Column 3 | Column 4 | Column 5 |
|---|------------------------------------|---|---|---|
| Industry | Commodity Value Index (CVI) | Potential Commodity Impact Score (PCIS, 0-3) | Climate Match to Commodity Score (CMCS, 0-5) | Commodity Damage Score (CDS columns 2 x 3 x 4) |
| Cattle (includes dairy and beef) | 11 | 2 | 1 | 22 |
| Timber (includes native and plantation forests) | 10 | 0 | | 0 |
| Aquaculture | 6 | 0 | | 0 |
| Sheep (includes wool and meat) | 5 | 2 | 1 | 10 |
| Vegetables | 5 | 0 | | 0 |
| Fruit (includes wine grapes) | 5 | 0 | | 0 |
| Poultry (including eggs) | 1.5 | 2 | 1 | 3 |
| Cereal grain (includes wheat, barley, sorghum etc) | 1 | 0 | | 0 |
| Other crops and horticulture (includes nuts and flowers) | 1 | 0 | | 0 |
| Pigs | 1 | 2 | 1 | 2 |
| Bees (includes honey, beeswax, and pollination) | 0.5 | 0 | | 0 |
| Oilseeds (includes canola, sunflower etc) | 0.5 | 0 | | 0 |
| Grain legumes (includes soybeans) | 0.3 | 0 | | 0 |
| Other livestock (includes goats and deer) | 0.3 | 2 | 1 | 0.6 |
| Total Commodity Damage Score (TCDS) | | | | 37.6 |

APPENDIX B: ASSIGNING SPECIES TO THREAT CATEGORIES

| A: Danger posed by individual animals (risk a captive or escaped individual would harm people) | B: Likelihood of establishment (risk that a particular species will establish a wild population in Tasmania) | C: Consequence of establishment (risk that an established population would cause harm) | Threat category | Implications for any proposed import into Tasmania |
|---|---|---|--------------------------------|--|
| Highly, Moderately or Not Dangerous | Extreme | Extreme | Extreme | Prohibited |
| Highly, Moderately or Not Dangerous | Extreme | High | | |
| Highly, Moderately or Not Dangerous | Extreme | Moderate | | |
| Highly, Moderately or Not Dangerous | Extreme | Low | | |
| Highly, Moderately or Not Dangerous | High | Extreme | | |
| Highly, Moderately or Not Dangerous | High | High | | |
| Highly, Moderately or Not Dangerous | Moderate | Extreme | | |
| Highly, Moderately or Not Dangerous | High | Moderate | Serious | Import restricted to those licence holders approved for keeping serious threat species |
| Highly, Moderately or Not Dangerous | High | Low | | |
| Highly, Moderately or Not Dangerous | Moderate | High | | |
| Highly Dangerous | Moderate | Moderate | | |
| Highly Dangerous | Moderate | Low | | |
| Highly, Moderately or Not Dangerous | Low | Extreme | | |
| Highly, Moderately or Not Dangerous | Low | High | | |
| Highly Dangerous | Low | Moderate | | |
| Highly Dangerous | Low | Low | | |
| Moderately or Not Dangerous | Moderate | Moderate | | |
| Moderately or Not Dangerous | Moderate | Low | | |
| Moderately or Not Dangerous | Low | Moderate | | |
| Moderately Dangerous | Low | Low | | |
| Not Dangerous | Low | Low | Low | Import permitted |
| Unknown | Any value | Any value | Extreme until proven otherwise | Prohibited |
| Any Value | Unknown | Any value | | |
| Any Value | Any value | Unknown | | |
| Unassessed | Unassessed | Unassessed | | |