

# Information for NZTCS Assessments

The aim is to collate information on species or taxa relevant to assessments under the New Zealand Threat Classification System (NZTCS, <https://nztc.org.nz>). Please complete this form and provide as much detailed information as possible, anecdotal information is also welcomed. Complete a separate form for each species or lower-level taxon individually by duplicating the ‘Taxon Details’ table below as needed. Do not use jargon, be clear and concise. When completed, send to the NZTCS administrator at [ThreatStatus@doc.govt.nz](mailto:ThreatStatus@doc.govt.nz).

Supplier’s Contact Details	
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## Additional notes from Fish & Game:

### Overarching themes for conservation status of New Zealand freshwater fish

- Lack of data. Threat ranking based largely on size of the population, and the increase or decrease from this. We need to acknowledge that all information on freshwater fish species is currently data deficient due to limited resources and issues with fish collecting and observing techniques. (“Whether the NZFFD and River Environments Classification (REC2) are sufficiently accurate as a basis for management”  
<https://www.mpi.govt.nz/dmsdocument/17050-National-Environmental-Standard-Plantation-Forestry-Additional-Fisheries-Advice#:~:text=Indeterminate%20taxa%20are%20populations%20of,been%20assigned%20to%20a%20species.> )
- Is appropriate to include ‘amount’ of population increase or decline; this is guesswork only, and potentially overly objective.
- Request clarity regarding whether those species which are not formally separate species are being classed as different taxa (if they are that will bump the threat rating of certain species through the roof). Indeterminate taxa currently realized are: Galaxias species D, Northern flathead galaxias, Southern flathead galaxias, Clutha flathead galaxias (includes Pomahaka galaxias) and Teviot flathead galaxiid. If dwarf galaxias become separate species that could change their threat rating considerably.
- Environmental threats are the main driver of decreased freshwater fish species distribution and abundance include but are not limited to:
  - a. Habitat loss due to water abstraction
  - b. Fish passage barriers (physical and environmental barriers – velocity and temperature barriers of certain channelized waterways provide barriers to fish)
  - c. Sediment infill of substrate
  - d. Lack of riparian vegetation
  - e. Wetland loss
  - f. Loss of breeding habitat

- g. Dissolved Oxygen losses overnight due to algae and macrophyte overgrowth
- h. Chemical impact on fish ability to locate suitable habitat
- i. Source/sink population dynamics
- Climate change is likely to create new threats for even previously stable freshwater fish populations
- Require a habitat risk analysis framework and tools in order to:
  - a. prevent further habitat loss and degradation
  - b. incorporate likely impacts of climate change
- Need to ensure all freshwater fish species are represented accurately in the threat classification system (e.g. Brook trout)
- There is a need to acknowledge and manage the impacts of legislative bodies mismanagement of resource consenting, grandfathered river management consents where best practice management is not applied, and the status quo carried out harms the freshwater flora and fauna. Active lobbying by certain parties is leading to steadily increasing inputs of nutrients, pollutants, and sediment.

Taxon Details	
Scientific name	<i>Galaxias cobinitis</i>
Common name	<b>Lowland longjaw galaxias</b>
Taxonomic status	<i>Does the taxon have a formally published name that is generally accepted by those working on the group?</i> <b>Yes</b>
Notes	<b>Nationally critical</b>
Population Size & Trend	
Location	
Estimated population size	
Estimated number of mature individuals	
Estimated population trend – Past	
Estimated population trend - Future	
Identified threats	<b>Water abstraction, habitat loss, sedimentation infill, climate change. Adept at burrowing, actual population size unlikely to be accurately determined.</b>
Notes on population size and trend	
Conservation Status & Qualifiers	

<b>Current threat status and qualifiers</b>	<b>Nationally critical</b>
<b>Recommended threat category and conservation status</b>	
<b>Recommended qualifiers</b>	<b>CR</b>
<b>Notes</b>	
<b>Taxon Details</b>	
<b>Scientific name</b>	<i>Neochanna burrowsius</i>
<b>Common name</b>	<b>Canterbury mudfish</b>
<b>Taxonomic status</b>	<i>Does the taxon have a formally published name that is generally accepted by those working on the group?</i> <b>Yes</b>
<b>Notes</b>	<i>(provide any relevant information known about this taxon)</i>
<b>Population Size &amp; Trend</b>	
<b>Location</b>	
<b>Estimated population size</b>	
<b>Estimated number of mature individuals</b>	
<b>Estimated population trend – Past</b>	
<b>Estimated population trend - Future</b>	
<b>Identified threats</b>	<b>Loss of original habitat (slow moving streams between large swamp areas) has driven mudfish to farm drains: drain clearance has the potential to eliminate local populations with national implications. Ongoing wetland loss, lowering water tables from abstraction, choking of drains with vegetation could lead to extinction events.</b>
<b>Notes on population size and trend</b>	
<b>Conservation Status &amp; Qualifiers</b>	
<b>Current threat status and qualifiers</b>	<b>Nationally critical</b>

<b>Recommended threat category and conservation status</b>	
<b>Recommended qualifiers</b>	CR
<b>Notes</b>	
<b>Taxon Details</b>	
<b>Scientific name</b>	<i>Galaxias "species D"</i>
<b>Common name</b>	<b>Clutha flathead galaxias (indeterminate)</b>
<b>Taxonomic status</b>	<i>Does the taxon have a formally published name that is generally accepted by those working on the group?</i> Yes
<b>Notes</b>	<b>Nationally critical</b>
<b>Population Size &amp; Trend</b>	
<b>Location</b>	
<b>Estimated population size</b>	
<b>Estimated number of mature individuals</b>	
<b>Estimated population trend – Past</b>	
<b>Estimated population trend - Future</b>	
<b>Identified threats</b>	
<b>Notes on population size and trend</b>	
<b>Conservation Status &amp; Qualifiers</b>	
<b>Current threat status and qualifiers</b>	<b>Nationally critical</b>
<b>Recommended threat category and conservation status</b>	
<b>Recommended qualifiers</b>	CR
<b>Notes</b>	
<b>Taxon Details</b>	

Scientific name	<i>Galaxias "Teviot"</i>
Common name	<b>Teviot flathead galaxias (indeterminate)</b>
Taxonomic status	Does the taxon have a formally published name that is generally accepted by those working on the group? <b>Yes</b>
Notes	(provide any relevant information known about this taxon)
<b>Population Size &amp; Trend</b>	
Location	
Estimated population size	
Estimated number of mature individuals	
Estimated population trend – Past	
Estimated population trend - Future	
Identified threats	
Notes on population size and trend	
<b>Conservation Status &amp; Qualifiers</b>	
Current threat status and qualifiers	<b>Nationally critical</b>
Recommended threat category and conservation status	
Recommended qualifiers	<b>CR</b>
Notes	
<b>Taxon Details</b>	
Scientific name	<i>Galaxias eldoni</i>
Common name	<b>Eldon's galaxias</b>
Taxonomic status	Does the taxon have a formally published name that is generally accepted by those working on the group? <b>Yes</b>
Notes	(provide any relevant information known about this taxon)

<b>Population Size &amp; Trend</b>	
<b>Location</b>	
<b>Estimated population size</b>	
<b>Estimated number of mature individuals</b>	
<b>Estimated population trend – Past</b>	
<b>Estimated population trend - Future</b>	
<b>Identified threats</b>	<b>Water abstraction, habitat loss, draining or infill of streams, forestry.</b>
<b>Notes on population size and trend</b>	<i>(e.g. change in population range)</i>
<b>Conservation Status &amp; Qualifiers</b>	
<b>Current threat status and qualifiers</b>	<b>Nationally endangered</b>
<b>Recommended threat category and conservation status</b>	<i>(using the latest <a href="#">NZTCS manual</a>, suggest the relevant threat category for the taxon)</i>
<b>Recommended qualifiers</b>	<b>CR</b>
<b>Notes</b>	<i>(provide any further information to support your recommendations)</i>
<b>Taxon Details</b>	
<b>Scientific name</b>	<b><i>Salmo salar</i></b>
<b>Common name</b>	<b>Atlantic salmon</b>
<b>Taxonomic status</b>	<i>Does the taxon have a formally published name that is generally accepted by those working on the group?</i> <b>Yes</b>
<b>Notes</b>	<i>(provide any relevant information known about this taxon)</i>
<b>Population Size &amp; Trend</b>	

<b>Location</b>	Was previously found in New Zealand – has not been seen in the wild in last 5 years.
<b>Estimated population size</b>	
<b>Estimated number of mature individuals</b>	
<b>Estimated population trend – Past</b>	
<b>Estimated population trend - Future</b>	
<b>Identified threats</b>	
<b>Notes on population size and trend</b>	EW
<b>Conservation Status &amp; Qualifiers</b>	
<b>Current threat status and qualifiers</b>	<b>Extinct in NZ</b>
<b>Recommended threat category and conservation status</b>	<b>Regionally Extinct</b>
<b>Recommended qualifiers</b>	EW, DPS, DPT
<b>Notes</b>	<b>This species is no longer found in New Zealand waters. Some small populations previously existed in farming operations however the species is not farmed any longer and no known populations exist in the wild or in captivity.</b>
<b>Taxon Details</b>	
<b>Scientific name</b>	<b><i>Oncorhynchus tshawytscha</i></b>
<b>Common name</b>	<b>Chinnok Salmon</b>
<b>Taxonomic status</b>	<i>Does the taxon have a formally published name that is generally accepted by those working on the group?</i> <b>Yes</b>
<b>Notes</b>	<i>(provide any relevant information known about this taxon)</i>
<b>Population Size &amp; Trend</b>	
<b>Location</b>	
<b>Estimated population size</b>	

Estimated number of mature individuals	
Estimated population trend – Past	
Estimated population trend - Future	
Identified threats	
Notes on population size and trend	DPS, DPT – data availability poor
<b>Conservation Status &amp; Qualifiers</b>	
Current threat status and qualifiers	<i>(if the species has not been assessed before, it is a 'New Listing')</i>
Recommended threat category and conservation status	
Recommended qualifiers	DPS, DPT
Notes	<i>(provide any further information to support your recommendations)</i>
<b>Taxon Details</b>	
Scientific name	<b><i>Salvelinus namaycush</i></b>
Common name	<b>Makinaw</b>
Taxonomic status	<i>Does the taxon have a formally published name that is generally accepted by those working on the group?</i> <b>Yes</b>
Notes	<i>(provide any relevant information known about this taxon)</i>
<b>Population Size &amp; Trend</b>	
Location	
Estimated population size	
Estimated number of mature individuals	
Estimated population trend – Past	
Estimated population trend - Future	
Identified threats	



<b>Notes on population size and trend</b>	<b>DPS, DPT – data availability is poor</b>
<b>Conservation Status &amp; Qualifiers</b>	
<b>Current threat status and qualifiers</b>	<i>(if the species has not been assessed before, it is a 'New Listing')</i>
<b>Recommended threat category and conservation status</b>	<b>CR</b>
<b>Recommended qualifiers</b>	<b>DPS, DPT</b>
<b>Notes</b>	<i>(provide any further information to support your recommendations)</i>

## Qualifiers

Qualifiers are an integral part of this classification system. They provide additional information about a taxon's assessment, status and management. Detailed definition can be found at [https://nzctcs.org.nz/content/NZTCS\\_QUALIFIERS](https://nzctcs.org.nz/content/NZTCS_QUALIFIERS).

- **BIOLOGICALLY SPARSE (Sp)**: The taxon naturally occurs within typically small and widely scattered subpopulations. This qualifier can apply to any 'Threatened' or 'At Risk' taxon.
- **CLIMATE IMPACT (CI)**: The taxon is adversely affected by long-term climate trends and/or extreme climatic events.
- **CONSERVATION DEPENDENT (CD)**: The taxon is likely to move to a worse conservation status if current management ceases.
- **CONSERVATION RESEARCH NEEDED (CR)**: Causes of decline and/or solutions for recovery are poorly understood and research is required.
- **DATA POOR: RECOGNITION (DPR)**: Confidence in the assessment is low because of difficulties in determining the identity of the taxon in the field and/or in the laboratory.
- **DATA POOR SIZE (DPS)**: Confidence in the assessment is low because of a lack of data on population size.
- **DATA POOR: TREND (DPT)**: Confidence in the assessment is low because of a lack of data on population trend.
- **EXTREME FLUCTUATIONS (EF)**: The taxon experiences extreme unnatural population fluctuations, or natural fluctuations overlaying human-induced declines, that increase the threat of extinction. When ranking taxa with extreme fluctuations, the lowest estimate of mature individuals should be used for determining population size, as a precautionary measure.
- **EXTINCT IN THE WILD (EW)**: The taxon is known only in captivity or cultivation or has been reintroduced to the wild but is not self-sustaining.
- **INCREASING (Inc)**: There is an ongoing or forecast increase of > 10% in the total population, taken over the next 10 years or three generations, whichever is longer. Note that this qualifier is redundant for taxa ranked as 'Recovering'.
- **ISLAND ENDEMIC (IE)**: A taxon whose natural distribution is restricted to one island archipelago (e.g. Auckland Islands) and is not part of the North or South Islands or Stewart Island/Rakiura.
- **NATURAL STATE (NS)**: A taxon that has a stable or increasing population that is presumed to be in a natural condition, i.e., has not experienced historical human-induced decline.
- **NATURALISED OVERSEAS (NO)**: A New Zealand endemic taxon that has been introduced by human agency to another country (deliberately or accidentally) and has naturalised there e.g., *Olearia traversiorum* in the Republic of Ireland.
- **ONE LOCATION (OL)**: Found at one location in New Zealand (geographically or ecologically distinct area) of less than 100 000 ha (1000 km<sup>2</sup>), in which a single event (e.g. a predator irruption) could easily affect all individuals of the taxon, e.g. L'Esperance Rock groundsel (*Senecio esperensis*) and Open Bay Island leech (*Hirudobdella antipodum*). 'OL' can apply to all 'Threatened', 'At Risk', Non-resident Native – Coloniser and Non-resident Native – Migrant taxa, regardless of whether their restricted distribution in New Zealand is natural or human-induced. Resident native taxa with

restricted distributions but where it is unlikely that all sub-populations would be threatened by a single event (e.g. because water channels within an archipelago are larger than known terrestrial predator swimming distances) should be qualified as 'Range Restricted' (RR).

- **PARTIAL DECLINE (PD):** The taxon is declining over most of its range, but with one or more secure populations (such as on offshore islands).
- **POPULATION FRAGMENTATION (PF):** Gene flow between subpopulations is hampered as a direct or indirect result of human activity. Naturally disjunct populations are not considered to be 'fragmented'.
- **POSSIBLY EXTINCT (PE):** A taxon that has not been observed for more than 50 years but for which there is little or no evidence to support declaring it extinct. This qualifier might apply to several Data Deficient and Nationally Critical taxa.
- **RANGE RESTRICTED (RR):** A taxon naturally confined to specific substrates, habitats or geographic areas of less than 1000 km<sup>2</sup> (100 000 ha); this is assessed by taking into account the area of occupied habitat of all sub-populations (and summing the areas of habitat if there is more than one sub-population), e.g. Chatham Island forget-me-not (*Myosotidium hortensia*) and Auckland Island snipe (*Coenocorypha aucklandica aucklandica*). This qualifier can apply to any 'Threatened' or 'At Risk' taxon. It is redundant if a taxon is confined to 'One Location' (OL).
- **RECRUITMENT FAILURE (RF):** The age structure of the current population is such that a catastrophic decline is likely in the future.
- **RELICT (Rel):** The taxon has declined since human arrival to less than 10% of its former range but its population has stabilised.
- **SECURE OVERSEAS (SO):** The taxon is secure in the parts of its natural range outside New Zealand.
- **SECURE OVERSEAS? (SO?):** It is uncertain whether a taxon of the same name that is secure in the parts of its natural range outside New Zealand is conspecific with the New Zealand taxon.
- **SECURE? OVERSEAS (S?O):** It is uncertain whether the taxon is secure in the parts of its natural range outside New Zealand.
- **THREATENED OVERSEAS (TO):** The taxon is threatened in the parts of its natural range outside New Zealand.
- **THREATENED OVERSEAS? (TO?):** It is uncertain whether a taxon of the same name that is threatened in the parts of its natural range outside New Zealand is conspecific with the New Zealand taxon.
- **THREATENED? OVERSEAS (T?O):** It is uncertain whether the taxon is threatened in the parts of its natural range outside New Zealand.