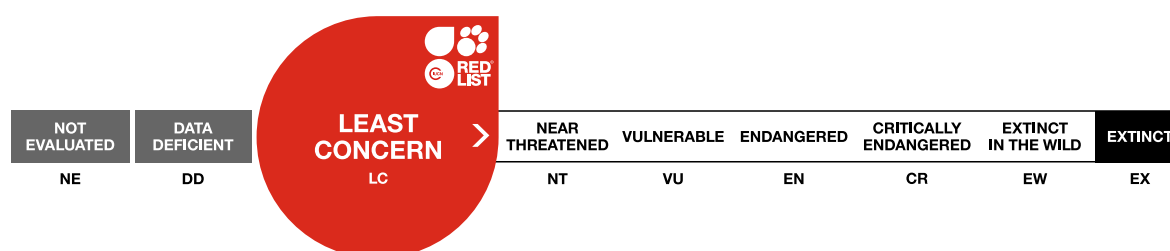




Sprattus fuegensis, Fuegian Sprat

Assessment by: Buratti, C., Díaz de Astarloa, J., Hüne, M., Irigoyen, A., Landaeta, M., Riestra, C., Vieira, J.P. & Di Dario, F.



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Taxonomy

Kingdom	Phylum	Class	Order	Family
Animalia	Chordata	Actinopterygii	Clupeiformes	Clupeidae

Scientific Name: *Sprattus fuegensis* (Jenyns, 1842)

Synonym(s):

- *Clupea fuegensis* Jenyns, 1842

Common Name(s):

- English: Fuegian Sprat, Patagonian Sprat
- Spanish; Castilian: Sardina Austral, Sardina Fueguina

Taxonomic Source(s):

Fricke, R., Eschmeyer, W.N. and Van der Laan, R. (eds). 2020. Eschmeyer's Catalog of Fishes: genera, species, references. Updated 02 March 2020. Available at: <http://researcharchive.calacademy.org/research/ichthyology/catalog/fishcatmain.asp>.

Assessment Information

Red List Category & Criteria: Least Concern [ver 3.1](#)

Year Published: 2020

Date Assessed: December 4, 2019

Justification:

This coastal, pelagic species is widely distributed in the southwestern Atlantic and southeastern Pacific. It is short-lived and has an estimated generation length of 3-4 years. It is targeted by commercial, artisanal fisheries in the northern part of its range in Chile. Total biomass has declined by about 40% over the past three generation lengths, or since 2006, in the Lakes Region of Chile, and that stock is considered overfished. However, it is not targeted elsewhere in its range at this time, including in the area that contains the largest proportion of its global population. Fishing activity is not expected to be driving global-level declines approaching a Near Threatened or threatened level at this time; therefore, it is listed as Least Concern. However, fishing effort may expand further south where it remains abundant, and this is a concern.

Previously Published Red List Assessments

2017 – Least Concern (LC)

<https://dx.doi.org/10.2305/IUCN.UK.2017-3.RLTS.T195021A99114137.en>

Geographic Range

Range Description:

This species is distributed in the southeastern Pacific off Chile north to Reloncaví Sound at 41°42'S south

to Tierra del Fuego and into the southwest Atlantic north to the southern San Jorge Gulf, including the Malvinas Islands (Whitehead 1985, Aranís *et al.* 2007). The depth range is 0-50 metres (Whitehead 1985).

Country Occurrence:

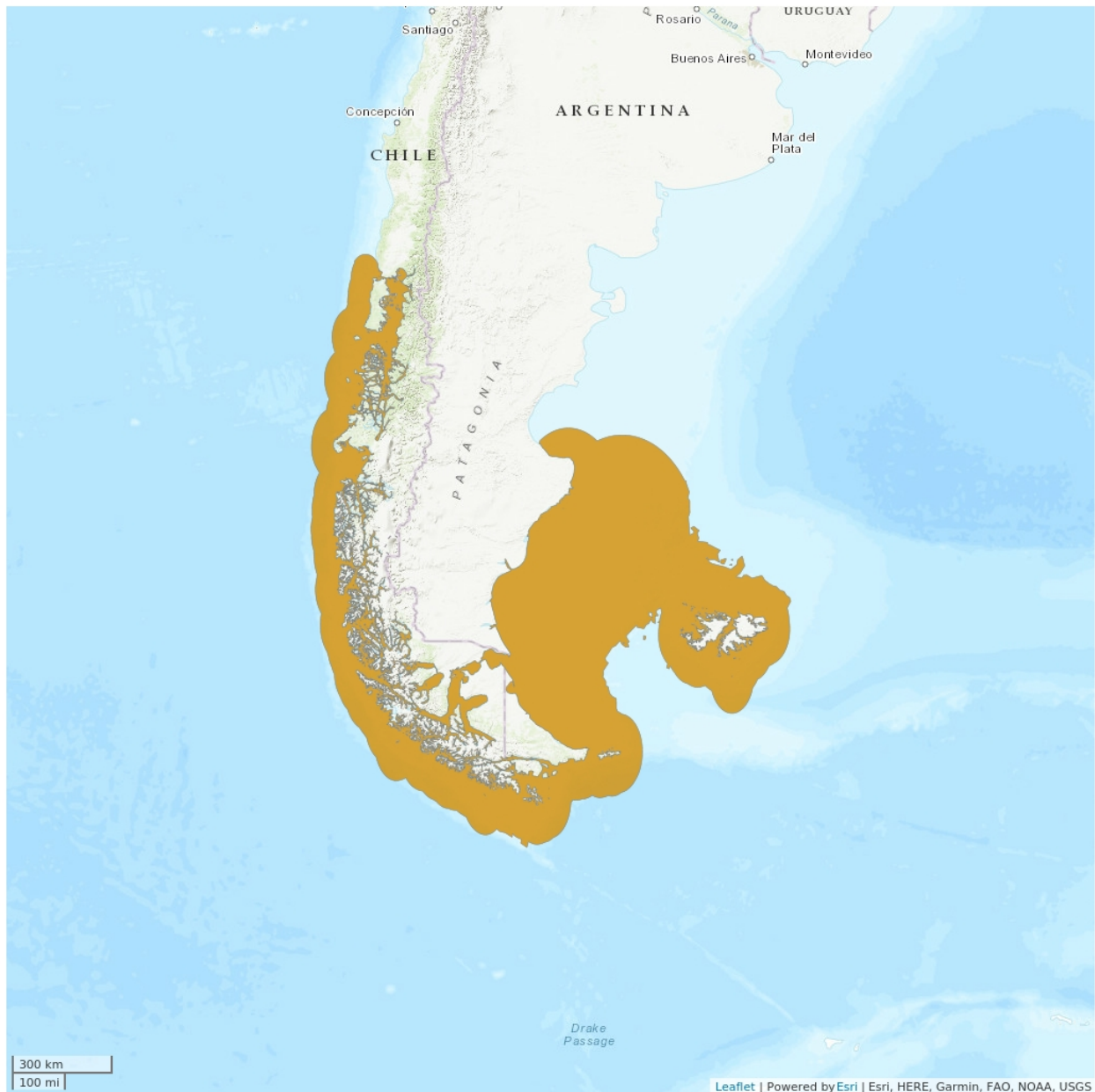
Native, Extant (resident): Argentina; Chile; Falkland Islands (Malvinas)

FAO Marine Fishing Areas:

Native: Pacific - southeast

Native: Atlantic - southwest

Distribution Map



Legend

■ EXTANT (RESIDENT)

Compiled by:

IUCN Marine Biodiversity Unit/GMSA 2020



The boundaries and names shown and the designations used on this map do not imply any official endorsement, acceptance or opinion by IUCN.



Population

This species is common throughout its range. No genetic structuring has been found between the Pacific and Atlantic, but they are treated as separate stocks (Canales-Aguirre *et al.* 2018, Casarsa *et al.* 2019).

In the Atlantic, it is most abundant south of San Jorge Gulf, especially in Tierra del Fuego and around the Malvinas Islands. One stock occurs in the Malvinas and the other occurs off the provinces of Santa Cruz and Tierra del Fuego, including the Fuegian channels (Hansen 1999, Casarsa *et al.* 2019). The Malvinas stock has larger fish and higher school densities as compared to the continental stock. Despite its high abundance, this species has never been fished on an industrial/commercial level in the Atlantic part of its range (Casarsa *et al.* 2019). It is possible a commercial fishery could develop in the future (Diez *et al.* 2018).

On the Pacific coast, it is more abundant in the southern part, especially the Strait of Magellan. On the genetic level, there is one stock in Chile, but on an ecological level, there are morphological differences that indicate there are two stocks. One is in the Chiloé inland sea (41°90'S-43°50'S) and the other inhabits the southernmost areas of Chile (Galleguillos *et al.* 2012). It is more abundant further south of the Lakes region and there appears to be some level of connectivity between the two stocks (Galleguillos *et al.* 2012, Leal and Zúñiga 2017). Stock assessments are conducted by IFOP for the inland waters of the Los Lagos Region, but not for the Magellan Region (southern area). There is an artisanal fishery that targets this species in the Los Lagos and Aysen Region, which is in the northern part of its range in Chile (Cubillos *et al.* 2015). It is not fished in the Magellan Strait region because the traditional fishery is located further north; however, as the population declines in the north, fishing effort has moved further south, and this is a concern.

Before 2006, species-specific fisheries data were not collected in part due to confusion with the common sardine (*Strangomera bentincki*). It was identified in the catch according to work by Aranís *et al.* (2007). In the pelagic purse-seine fishery of inland waters of Los Lagos (Chiloé), annual landings have been declining in recent years. Landings steeply declined between 2009 and 2010 and remained around 20,000 t from 2010 to 2017. Across the entire time period (2006-2017), catch per unit effort varied with no clear overall trend (Leal and Zúñiga 2017). In 2018, landings (9,500 t) declined by 56% compared to the previous year and recruitment was poor (IFOP 2020). According to a hydroacoustic survey, acoustic biomass in 2016 was 106,000 t and then declined to 66,800 t in 2017. Total biomass for the time period from 2006 to 2017 peaked in 2006 at 217,822 t and declined thereafter to a low of 94,018 t in 2011 and varied between 108,862 t to 143,742 t from 2012 to 2017, which represents about a 40% decline since 2006, or over the past three generation lengths. Spawning biomass also had a declining trend from 2006 to 2012. Recruitment strength has varied widely from year to year. Fishing mortality increased between 2006 to 2009 but declined in subsequent years when catch limits were implemented. According to the most recent stock assessment, it is overfished, and overfishing is occurring (Leal and Zúñiga 2017).

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

This pelagic species forms schools in coastal waters in both inshore and offshore areas. Juveniles utilize inshore areas to feed. The maximum standard length is 18 cm but it is most commonly found to 15 cm (Whitehead 1985). A major nursery ground is located off the coast of Santa Cruz and Tierra del Fuego,

Argentina. Spawning occurs from October to January off Argentina (Sanchez and Mabragana 2002). Spawning occurs in the inland sea area off Chiloé from September to December (Leal *et al.* 2011). A spawning and nursery area is located on the Burdwood Bank (Alonso *et al.* 2018). It is an important prey item of many large species in Patagonian waters (Montecinos *et al.* 2016, Diez *et al.* 2018). Natural mortality is estimated as 0.83-1.3 year⁻¹ and longevity is at least 6 years (Leal *et al.* 2011, Cerna *et al.* 2014, Leal and Zúñiga 2017). Age at first maturity is 2 years (Hansen 1999). When applying an age at first reproduction of 2 years and longevity of 6 years, its estimated generation length is 4 years based on the following equation recommended by the IUCN Red List methods: Age at first reproduction + (Age at last reproduction – age at first reproduction)/2. When applying an alternative equation recommended by the IUCN Red List methods: 1/adult mortality + age of first reproduction, the generation length is about 3 years.

Systems: Marine

Use and Trade

This species is targeted by pelagic artisanal fisheries using small purse seines in the Chiloé region of Chile (Cerna *et al.* 2014).

Threats

Fishing activity is not expected to be driving global-level declines approaching a Near Threatened or threatened level at this time.

Conservation Actions (see Appendix for additional information)

An annual total allowable catch limit has been in place in Chile since 2008 and the Fisheries Development Institute of Chile (IFOP) has conducted annual stock assessments since 2010 and acoustic surveys of biomass since 2014 (Cerna *et al.* 2014, Leal and Zúñiga 2017). The Atlantic stocks are monitored via scientific surveys (Casarsa *et al.* 2019). It occurs in the marine protected area known as Bahía Tictoc in Corcovado Gulf, Chile (Ferrada-Fuentes *et al.* 2014) and the Namuncurá Marine Protected Area–Burdwood Bank located on the Argentinian shelf (Alonso *et al.* 2018).

Credits

Assessor(s): Buratti, C., Díaz de Astarloa, J., Hüne, M., Irigoyen, A., Landaeta, M., Riestra, C., Vieira, J.P. & Di Dario, F.

Reviewer(s): Linardich, C.

Contributor(s): Campagna, C.

Facilitator(s) and Compiler(s): Falabella, V., Linardich, C. & Wildlife Conservation Society

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Citation

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External Resources

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Appendix

Habitats

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Habitat	Season	Suitability	Major Importance?
9. Marine Neritic -> 9.1. Marine Neritic - Pelagic	Resident	Suitable	Yes

Use and Trade

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

End Use	Local	National	International
Food - human	No	Yes	No

Conservation Actions in Place

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Action in Place
In-place land/water protection
Occurs in at least one protected area: Yes
In-place species management
Harvest management plan: Yes

Conservation Actions Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Conservation Action Needed
3. Species management -> 3.1. Species management -> 3.1.1. Harvest management

Research Needed

(<http://www.iucnredlist.org/technical-documents/classification-schemes>)

Research Needed
3. Monitoring -> 3.1. Population trends

Additional Data Fields

Distribution
Lower depth limit (m): 50
Upper depth limit (m): 0
Habitats and Ecology
Generation Length (years): 3-4

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