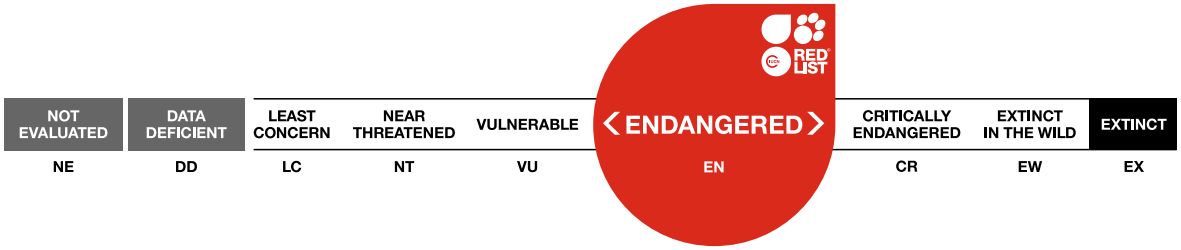
The IUCN Red List of Threatened Species™
ISSN 2307-8235 (online)
IUCN 2025: T206016607A206017200
Scope(s): Global
Language: English

Tilia sabetii, Sabeti Lime

Assessment by: Zare, H., Yousefzadeh, H., Zehzad, B., Crowley, D. & Kozlowski, G.



View on www.iucnredlist.org

Citation: Zare, H., Yousefzadeh, H., Zehzad, B., Crowley, D. & Kozlowski, G. 2025. *Tilia sabetii*. *The IUCN Red List of Threatened Species* 2025: e.T206016607A206017200.
https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T206016607A206017200.en

Taxonomy

Kingdom	Phylum	Class	Order	Family
Plantae	Tracheophyta	Magnoliopsida	Malvales	Malvaceae

Scientific Name: *Tilia sabetii* H.Zare

Common Name(s):

- English: Sabeti Lime
- Persian: Namdare-sabeti

Taxonomic Source(s):

WCVP. 2021. World Checklist of Vascular Plants, version 2.0. Facilitated by the Royal Botanic Gardens, Kew. Available at: http://wcvp.science.kew.org/. (Accessed: 28 January 2021).

Assessment Information

Red List Category & Criteria: Endangered B1ab(iii)+2ab(iii) ver 3.1

Year Published: 2025

Date Assessed: July 3, 2025

Justification:

Tilia sabetii is a large tree native to a restricted area in northern Iran, with a restricted range at four locations (extent of occurrence of 850 km^2 and area of occupancy of 16 km^2). It also has a small population, believed to comprise between 1,500 and 4,000 trees, though no more than 2,500 mature individuals. It has experienced population decline and is threatened by dam construction and extreme weather events. The habitat is threatened by illegal logging and wood trafficking, as well as overgrazing by livestock. The known range if this species is next to a fast-flowing river, which poses a high risk of uprooting the trees. Additionally, the species remains largely unknown to researchers and conservation experts, which hampers effective protection efforts. It is assessed as Endangered.

Geographic Range

Range Description:

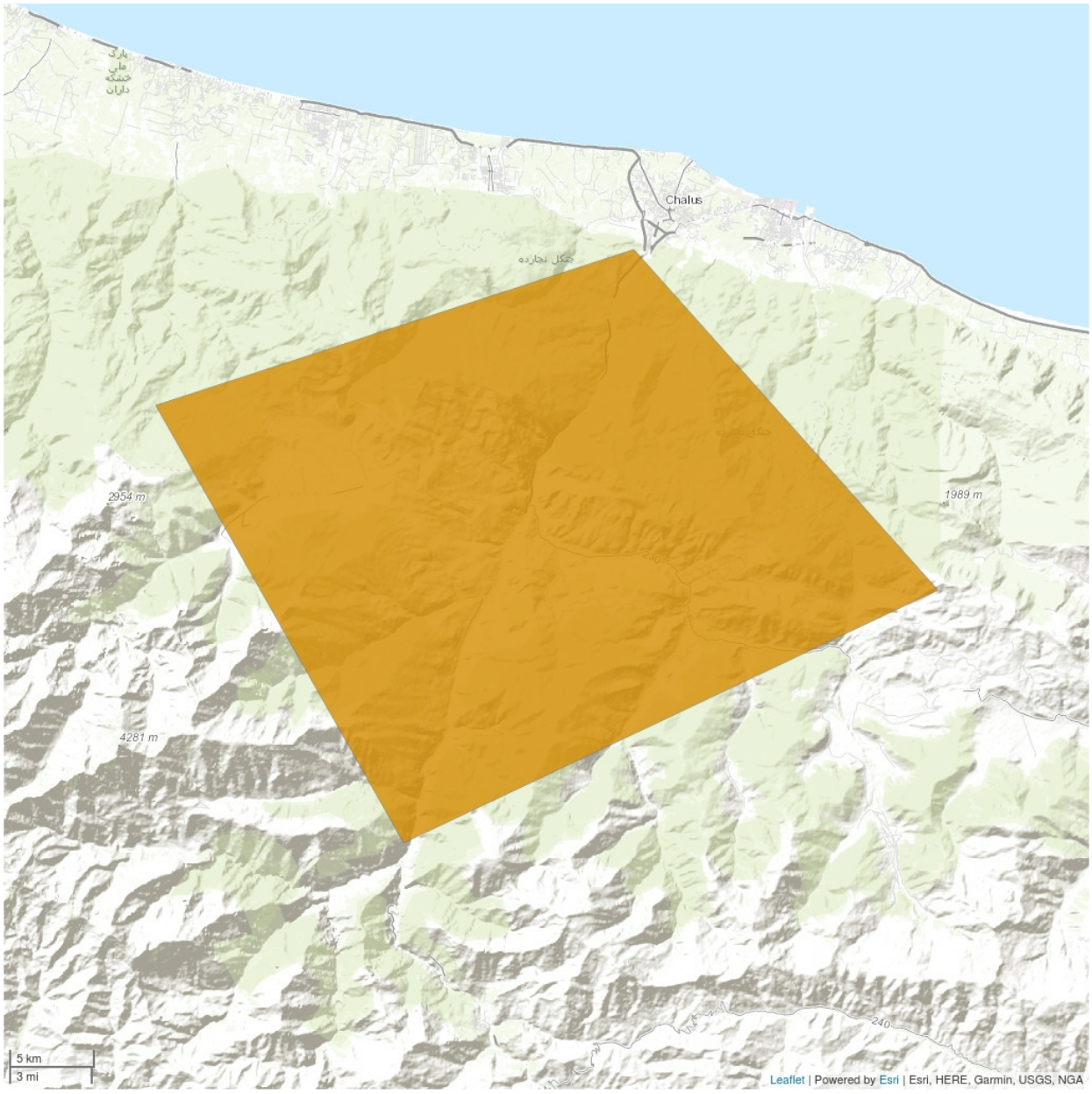
Tilia sabetii is native to northern Iran, where it is found in parts of Mazandaran Province. Specifically, it occurs along the Chalus River valley and in Hezarcham.

Country Occurrence:

Native, Extant (resident): Iran, Islamic Republic of

https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T206016607A206017200.en

Distribution Map



Legend

EXTANT (RESIDENT)

Compiled by:

Global Tree Assessment 2025

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

https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T206016607A206017200.en

Population

The species is distributed along the Chalus River valley and on the cliffs. As with many other species of *Tilia*, the individual trees are solitary and dispersed. Thus, the individuals of *T. sabetii* are often mixed with other highland trees and shrubs. The distribution range is estimated to be between 300 and 400 hectares. Based on recent field observations, there are at average of between five and 10 trees per hectare. Thus, globally, the number of individuals of this species could be between a minimum 1,500–2,000 and a maximum 3,000–4,000, and a probable maximum of 2,500 mature specimens.

Current Population Trend: Decreasing

Habitat and Ecology (see Appendix for additional information)

Tilia sabetii is a tree that grows at high elevations and in deep and semi-humid valleys along the Chalus River. Like other *Tilia* species, it requires light but moist soils. It grows on loamy soils and light semi-deep soils with humus layers as well as in crevices of boulders and rocks. Only few occurrences of this species have been observed in the rocky areas upstream of the Chalus river, and it seems that this species requires more humid conditions than the other *Tilia* species in Iran.

Systems: Terrestrial

Use and Trade (see Appendix for additional information)

Currently, due to specific habitat conditions (rocky sites, inaccessible to livestock and ranchers and located in areas near the roaring river of Chalus), no local or commercial use of this species has been reported so far.

Threats (see Appendix for additional information)

Common threats to the Hyrcanian forests, where the species occurs, include illegal logging and wood trafficking, which lead to habitat loss and fragmentation. Overgrazing by livestock negatively impacts the natural regeneration of linden trees and understory vegetation. Additionally, the cutting of tree branches for animal fodder further damages the forest structure and reduces its capacity to recover. These factors collectively contribute to the degradation and decline of the Hyrcanian forest ecosystem and its biodiversity. There is also a possibility of a dam construction on the Chalus River, which could submerge and thus destroy the habitat of this species. Also, floods from side roads sometimes uproot trees along the river.

The main threat to *Tilia sabetii* is the limited number of known habitats and low individuals within the population. Its current known habitat is located next to a fast-flowing river, which poses a high risk of uprooting the trees. Additionally, the species remains largely unknown to researchers and conservation experts, which hampers effective protection efforts.

Conservation Actions (see Appendix for additional information)

The first step to protect this species is to add the occupied habitat of this species to the list of protected areas in Iran. Due to the small total area and the small number of subpopulations, the risk of extinction of this species is very high. *Ex situ* conservation of this species is thus highly necessary. Raising awareness among the public media and local people, especially nature lovers, about this species will create enthusiasm and motivation for better protection of this species.

https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T206016607A206017200.en

Credits

Assessor(s): Zare, H., Yousefzadeh, H., Zehzad, B., Crowley, D. & Kozlowski, G.

Reviewer(s): Rivers, M.C. & Beech, E.

https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T206016607A206017200.en

Bibliography

IUCN. 2025. The IUCN Red List of Threatened Species. Version 2025-2. Available at: www.iucnredlist.org. (Accessed: 10 October 2025).

Zare, H. and Amini, T. 2012. A Review of the Genus *Alnus* Gaertn. In Iran, New Records and New Species. *Iranian journal of Botany* 18(1): 10-21.

Citation

Zare, H., Yousefzadeh, H., Zehzad, B., Crowley, D. & Kozlowski, G. 2025. *Tilia sabetii*. *The IUCN Red List of Threatened Species* 2025: e.T206016607A206017200. https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T206016607A206017200.en

Disclaimer

To make use of this information, please check the Terms of Use.

External Resources

For Supplementary Material, and for Images and External Links to Additional Information, please see the Red List website.

Appendix

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

Habitat	Season	Suitability	Major Importance?
1. Forest -> 1.4. Forest - Temperate	-	Suitable	-

Plant and Fungal growth forms
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Plant and Fungal growth forms
TL. Tree - large

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

Threat	Timing	Scope	Severity
2. Agriculture & aquaculture -> 2.3. Livestock farming & ranching -> 2.3.4. Scale Unknown/Unrecorded	Ongoing	-	-
5. Biological resource use -> 5.3. Logging & wood harvesting -> 5.3.5. Motivation Unknown/Unrecorded	Ongoing	-	-
7. Natural system modifications -> 7.2. Dams & water management/use -> 7.2.11. Dams (size unknown)	Unknown	-	-
11. Climate change & severe weather -> 11.4. Storms & flooding	Ongoing	Unknown	Negligible declines

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: No

Conservation Actions Needed
(http://www.iucnredlist.org/technical-documents/classification-schemes)

Conservation Action Needed	Notes
1. Land/water protection -> 1.2. Resource & habitat protection	-

https://dx.doi.org/10.2305/IUCN.UK.2025-2.RLTS.T206016607A206017200.en

Conservation Action Needed	Notes
3. Species management -> 3.4. Ex-situ conservation -> 3.4.2. Genome resource bank	-
4. Education & awareness -> 4.3. Awareness & communications	-

Research Needed

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

Research Needed	Notes
1. Research -> 1.2. Population size, distribution & trends	-
1. Research -> 1.5. Threats	-

Additional Data Fields

Distribution
Estimated area of occupancy (AOO) (km²): 16
Estimated extent of occurrence (EOO) (km²): 850
Number of Locations: 4
Lower elevation limit (m): 950
Upper elevation limit (m): 1,500
Population
Number of mature individuals: 1,500-2,500
Habitats and Ecology
Continuing decline in area, extent and/or quality of habitat: Yes

The IUCN Red List Partnership

The IUCN Red List of Threatened Species™ is produced and managed by the IUCN Global Species Programme, the IUCN Species Survival Commission (SSC) and The IUCN Red List Partnership.

The IUCN Red List Partners are: ABQ BioPark; Arizona State University; BirdLife International; Botanic Gardens Conservation International; Conservation International; Missouri Botanical Garden; NatureServe; Re:wild; Royal Botanic Gardens, Kew; Sapienza University of Rome; Senckenberg Society for Nature Research; Texas A&M University; and Zoological Society of London.