

Non-detriment finding for soft-shelled tortoise (*Malacochersus tornieri*)

VKM, Jo S. Hermansen, Katrine Eldegard, Matthew
Grainger, Eli K. Rueness, Hugo de Boer

VKM Bulletin 2024: 23
Non-detriment finding for soft-shelled tortoise (*Malacochersus tornieri*)

Published: 10.10.2024

ISSN: 2704-1689
Norwegian Scientific Committee for Food and Environment (VKM)
Postboks 222 Skøyen
0213 Oslo
Norway

Phone: +47 21 62 28 00
Email: vkm@vkm.no

vkm.no

Suggested citation: VKM, Jo S. Hermansen, Katrine Eldegard, Matthew Grainger, Eli K. Rueness, Hugo de Boer (2024). Non-detriment finding for soft-shelled tortoise (*Malacochersus tornieri*). VKM Bulletin 2024:20, ISSN: 2704-1689. Norwegian Scientific Committee for Food and Environment (VKM), Oslo, Norway.

©2024 VKM / [CC BY-ND 4.0](https://creativecommons.org/licenses/by-nd/4.0/)

Non-detriment finding for soft-shelled tortoise (*Malacochersus tornieri*)

Authors: VKM Secretariat member Jo S. Hermansen. Reviewed and approved by VKM Panel on CITES members Katrine Eldegard (Norwegian University of Life Sciences), Matthew Grainger (Norwegian Institute for Nature Research), Eli K. Rueness (University of Oslo), Hugo de Boer (University of Oslo).

Competing interests: The authors declare no competing interests in relation to this NDF.

Date: 18.09.2024

Scientific name: *Malacochersus tornieri* (Siebenrock, 1903)

Common name: Soft-shelled tortoise, crevice tortoise, Tornier's tortoise, pancake tortoise, softshell tortoise

Norwegian name: Pannekakeskilpadde

Type of permit: CITES Appendix I; Norwegian CITES Regulation Annex 1, list A
Country of Export: Finland (FI)
Country of Import: Norway (NO)

Purpose and source: The proposal concerns the import (purpose-of-transaction code Z) of one live male soft-shelled tortoise to Kristiansand Dyrepark AS (Norway) from Helsinki Zoo (Finland). Source code F (born in captivity) is used on the Finnish CITES export permit. Source code C (bred in captivity) is used on the Norwegian CITES import application.

For Appendix I species (Norwegian Cites Regulation Annex 1, list A) it is required to establish that import will not be detrimental to the survival of that species, in compliance with CITES Article III.

VKM has adopted the definition of detriment, cf. Conf. 16.7 (Rev. CoP17) suggested by the U.S Fish and Wildlife Service Division of Scientific Authority:

1. Harvest that is not sustainable.
2. Harvest that harms the status of the species in the wild.
3. Removal from the wild that results in habitat loss or destruction, or that interferes with recovery efforts for a species.

Conclusion

VKM concludes that the import to Norway from Finland of one live soft-shelled tortoise that was either born or bred in captivity will not be detrimental to the survival of the species.

The conclusion is based on the following factors:

- The individual was either born or bred in captivity at Helsinki Zoo (source code F is used on the Finnish CITES export permit while source code C is used on the Norwegian CITES import application). The import does therefore not involve harvest or removal from the wild.
- The transfer is between EAZA zoos and according to the recommendation of the EAZA Ex situ Programme (EEP) coordinator of the species.

1. Biological information

Distribution

Malacochersus tornieri has a native distribution in East Africa which is incompletely known (Mwaya et al., 2018). It is known to occur disjunctly within both Kenya and the United Republic of Tanzania as well as at a single known location in northern Nakonde District, Zambia (Mwaya et al., 2018 and references therein; Mwaya et al., 2019 and references therein; UNEP, 2024). The area of suitable microhabitat is limited to rocky areas with appropriate crevices. *Malacochersus tornieri* has a limited home range and is not migratory (Mwaya et al., 2018 and reference therein; Mwaya et al., 2019 and references therein).

Life history

Because *Malacochersus tornieri* spends most of the time hiding inside deep rock crevices, reproductive information on the species from the wild is limited and largely anecdotal (Mwaya et al., 2018). The species matures slowly and exhibits low fecundity, with females laying usually one or rarely two eggs annually. Individuals become sexually mature at age 5-9 years and generation time is estimated to be approximately 15 years (Mwaya et al., 2018 and references therein; Mwaya et al., 2019 and references therein).

Role in the ecosystem

Malacochersus tornieri is a small, flat, soft-shelled tortoise that can reach up to 17.8 cm in carapace length and 500 g in weight. Its flat, soft shell is flexible which allows it to live in rock crevices in arid thornbush and savanna landscapes, particularly on rocky outcrops (kopjes). The species is considered herbivorous although dietary breadth and plant preferences are poorly known (Mwaya et al., 2018 and references therein). Likely predators of *Malacochersus tornieri* include white-tailed mongoose (*Ichneumia albicauda*) and Neumann's genet (*Genetta genetta*) (Mwaya et al., 2018 and references therein).

2. Population trend

The *Malacochersus tornieri* population is severely fragmented and the status of subpopulations is incompletely known. Many subpopulations are decreasing, with abundances varying according to habitat quality and microhabitat features (Mwaya et al., 2018 and references therein; Mwaya et al., 2019 and references therein). Collection for trade, habitat loss, and anthropogenic changes contribute to population declines. According to Mwaya et al. (2019), population reductions of approximately 80% have been observed over the past two generations (30 years) and are predicted for the next 15 years.

3. Conservation status

IUCN Red List of Threatened species (Mwaya et al., 2019): Critically Endangered (CR; A4abcd).

Due to its limited distribution, specific habitat needs, low population densities, fragmented populations, reduced reproductive capacity, and overexploitation for the international live animal trade, Mwaya et al. (2018) considered the species to be highly vulnerable to extinction.

4. Threats

In the latest IUCN Red List assessment from 2018 (Mwaya et al., 2019), *Malacochersus tornieri* was assessed to be severely threatened by overexploitation for the international live exotic animal trade, both legal and illegal (note uplisting to CITES Appendix I 26/11/2019). Removal of individuals for trade can quickly reduce populations due to the species' limited movement and small home range (Mwaya et al., 2018 and references therein; Mwaya et al., 2019 and reference therein). Reduction of available habitat caused by rock destruction for various purposes including illegal collection, construction, slab and ballast extraction, and kiln building for charcoal production further threaten the species (Mwaya et al., 2019 and references therein). Vegetation removal from slash-and-burn agriculture practices, wildfires, and charcoal burning harms feeding, increases predation risk, and causes thermal stress. Livestock grazing is believed to have minor impact, and local consumption of the tortoise by the Hadza in Tanzania is considered minimal (Mwaya et al., 2019 and references therein).

5. Conservation and management measures:

International legislation

Malacochersus tornieri is listed in CITES Appendix I (since 26/11/2019). There are no current quotas or suspensions in place for this species (UNEP, 2024).

Malacochersus tornieri is listed in the EU Wildlife Trade Regulations Annex A (since 01/06/1997). There are no current suspensions or opinions for this species (UNEP, 2024).

Conservation measures

Malacochersus tornieri was uplisted to CITES Appendix I on 26/11/2019 (UNEP, 2024).

Less than a quarter (estimated to 22.6%) of the species' habitat is protected, with most populations occurring outside protected areas, exposing *Malacochersus tornieri* to illegal collection and anthropogenic habitat disturbance (Mwaya et al., 2019).

6. Trade/use

Legal

Up until the end of 2019, *Malacochersus tornieri* was traded in high numbers in the international pet market, with significant exports from Kenya (4,749 animals 1978-1981, 1996-1999, 2005-06, 2010 onward) and Tanzania (19,505 animals from 1985 onwards), and particularly high numbers from Zambia (17,160 live animals exported since 1995, 6,400 in 2011 alone) given the limited area of occurrence in that country (Mwaya et al., 2019).

Since uplisting to CITES Appendix I 26/11/2019, commercial trade is prohibited and no trade in wild-caught specimens has been registered since 2020 (CITES Trade Database, 2024). Monitoring of trade and its impact is, however, complicated by undeclared or illegal activity (Mwaya et al., 2019 and references therein).

Illegal

Mwaya et al. (2019) concluded that illegal trade is suggested by declared exports without corresponding import records from Mozambique and Congo (DRC) and a

confiscation in Uganda. Mwaya et al. (2019) furthermore assessed it as highly likely that that wild-collected specimens were being illegally exported as captive-bred in Kenya, as no established marking system was in place (note uplisting to CITES Appendix I 26/11/2019). Moreover, collectors often damage habitats by using tools to access the tortoises' crevice refuges, further threatening populations (Mwaya et al., 2019 and references therein).

References

CITES Trade Database (2024). Compiled by UNEP-WCMC for the CITES Secretariat. Available at: trade.cites.org. Accessed [11.09.20024].

Mwaya, R. T., Moll, D., Malonza, P. K., and Ngwava, J. M. (2018). *Malacochersus tornieri* (Siebenrock 1903) – Pancake Tortoise, Tornier's Tortoise, Soft-shelled Tortoise, Crevice Tortoise, Kobe Ya Mawe, Kobe Kama Chapati. In: Rhodin, A. G. J., Iverson, J. B., van Dijk, P. P., Stanford, C. B., Goode, E. V., Buhlmann, K. A., Pritchard, P. C. H., and Mittermeier, R. A. (Eds.). Conservation Biology of Freshwater Turtles and Tortoises: A Compilation Project of the IUCN/SSC Tortoise and Freshwater Turtle Specialist Group. *Chelonian Research Monographs*, 5(12), 107.1–107.15. doi: 10.3854/crm.5.107.tornieri.v1.2018; iucn-tftsg.org/cbftt/

Mwaya, R. T., Malonza, P. K., Ngwava, J. M., Moll, D., Schmidt, F. A. C. & Rhodin, G. J. (2019). *Malacochersus tornieri*. *The IUCN Red List of Threatened Species* 2019: e.T12696A508210. <https://dx.doi.org/10.2305/IUCN.UK.2019-1.RLTS.T12696A508210.en>. Accessed on 11 September 2024.

UNEP (2024). The Species+ Website. Nairobi, Kenya. Compiled by UNEP-WCMC, Cambridge, UK. Available at: www.speciesplus.net. [Accessed 12/09/2024].