



Guidelines for IUCN Red List Assessments of Felidae Version 2021



Copyrights from top left to bottom right: Andean cat: J. Sanderson, Pampas cat: B. Bender, ocelot: P. Meier, margay: T. G. de Oliveira, Geoffroy's cat: A. Sliwa, Northern tiger cat: T. G. Oliveira, Southern tiger cat: Projeto Gatos do Mato – Brasil, Guiña: A. Sliwa, Jaguarundi: A. Sliwa, puma: A. Sliwa, jaguar: A. Sliwa, bobcat: S. Kennerknecht/Pumapix, Canada lynx: M. O'Donghue, Iberian lynx: A. Sliwa, Lurasian lynx: E. Pessenti, snow leopard: A. Sliwa, European wildcat: A. Sliwa, Felis lybica: D. Khandal, Pallas's cat: U. Breitenmoser, Chinese mountain cat: J. Sanderson, sand cat: A. Sliwa, black-footed cat: A. Sliwa, African golden cat: L. Bahaa-el-din/Panthera, cheetah: A. Sliwa, Lion: P. Funston, serval: A. Sliwa, leopard: P. Meier, caracal: L. Bahaa-el-din, tiger: P. Meier, Jungle cat: J. Tiwari, mainland clouded leopard: J. Sanderson, Sunda clounded leopard: A. Hearn, Asiatic golden cat: A. Sliwa, Borneo bay cat: J. Ross & A. Hearn, flat-headed cat: J. Sanderson, rusty-spotted cat: K. Patel, fishing cat: K. Povey, marbled cat: S. Kennerknecht/Panthera, leopard cat: R. Pandit, *Prionailurus javanensis*: J. Ross & A. Hearn

Involved people and their roles in the IUCN Red List Assessment process

IUCN SSC Cat Specialist Group Co- Chairs (Cat SG)	 Decide if a taxon needs to be re-assessed or if a taxon needs to be assessed for the first time Make the pre-final check of the assessment before sending it to the Global Mammal Assessment Programm team in Rome, which after a check, forwards it to the Red List Unit in Cambridge
Red List Authority RLA (here the Cat SG)	 Establishes mechanisms for assessing and regularly re-assessing species Prepares Red List Assessments Works together with the IUCN Global Species Programme Serves as the taxonomic authority for species falling into the remit of the RLA Has jurisdictional responsibility for deciding the circumstances and conditions under which to undertake assessments to taxa at regional and/or national level or below species level Reviewers and assessors are generally part of the RLA
Red List Authority Coordinator (Coordinator)	 Oversees and coordinates Red List activities and is responsible for verifying Red List assessments Serves as the contact person between the RLA, assessors, reviewers and IUCN structures Checks the assessment on its consistency, completeness and correctness before and after the review Submits all reviewed assessments through the Species Information Service to the GMAP and RL Unit Ensures members of the RLA, assessors and reviewers are familiar with all relevant IUCN documents Requires assessors to consult all relevant literature and all relevant people and that they do not exhibit prejudice towards any materials or people Assists assessors to seek the best available data, to contact people and to create distribution maps Assures assessors provide all required supporting information and that they adhere to the current version of the IUCN guidelines Ensures that all assessors and reviewers have completed and signed a <i>Conflict of Interest declaration</i>
Lead Assessor (LA)	 Knows the species conservation status well, has a good network and (ideally) already experience with RL assessments Coordinates the assessment of the species and is the contact link to the Coordinator Provides and compiles all current relevant available data and information for the assessment Includes all relevant people into the assessment, often including people with a good understanding of range-wide trend in e.g. habitat change, wildlife trade etc. Prepares assessment together with members of the assessor's team, providing information supporting the category and criteria Assigns a Red List Categories and Criteria considering all relevant data to the species Justifies that the assessment is following the Guidelines for using the IUCN Red List Categories and Criteria and documentation requirements of the IUCN Prepares a distribution range map following the IUCN mapping standards
Members of the Assessor's Team (AT)	 Provide and compile all current relevant available data and information for the assessment Prepare assessment together with lead assessor Apply, together with the lead assessor, the Red List Categories and Criteria
Contributor (C) Reviewer (R)	 Provides data and contributes knowledge but does not apply the Red List Categories and Criteria Is not involved in the assessment (or only as contributor) At least one reviewer has very good knowledge of the IUCN Red List Categories and Criteria and already experience in Red List Assessments Reads assessment and additional information and confirms, whether the information has been interpreted appropriately and the IUCN Red List Categories and Criteria have been applied correctly
Global Mammal Assessment Programm team (GMAP)	 Checks Red List assessments for its consistency and completeness Checks whether the Red List Categories and Criteria have been applied correctly and that appropriate supporting information has been included Reviews the distribution maps (if all needed information is provided and the maps correctly compiled according to IUCN standards)
IUCN Red List Unit (RL Unit)	 Manages Red List database/website, field petitions and enquiries Makes final review of the assessment after submission into the Species Information Service Checks whether the Red List Categories and Criteria have been applied correctly and that appropriate supporting information has been included Decides if an assessment is ready for publication on the IUCN Red List of Threatened Species website and makes the final assessment sign-off

IUCN Red List Assessment Process

AT = Assessor's team 1. Cat SG Co-chairs contact Coordinator C = Contributors 1. Any person asks for Co-chairs = IUCN/SSC Cat SG co-chairs species assessment . Coordinator contacts Co-chairs LA = Lead assessor R = Reviewer Coordinator = Red List authority coordinator GMAP = Global Mammal Assessment Programm assessment Assessment is discharged RL Unit = Red List Unit 2. Co-chairs define LA and R 3. Coordinator contacts LA and R and provides information, SIS document and Conflict of interest declaration 4. LA invites members of AT C provide data and knowledge 5. LA and AT contact C 6. LA sends list of members of the AT and Conflict of interest declaration to Coordinator 7. Coordinator checks Conflict of interest declaration and gives feedback on list of members of the AT 8. LA and AT compile assessment including distribution map LA (and AT) revise 9. LA sends assessment to Coordinator lassessment 10. Coordinator checks assessment formally 'Coordinator sends assessment assessment back to LA ¥ Yes 11. Coordinator sends assessment and Conflict of interest declaration to R 12. R checks assessment with regards to content 13. R sends feedback to other R and to Coordinator and the Conflict of interest declaration to Coordinator 14. Coordinator checks Conflict of interest declaration, formally checks review and sends reviewed assessment to LA 15. LA (and AT) revise assessment and sends it to Coordinator 16. Coordinator formally checks revised assessment assessmen 17. Coordinator checks assessment on consistency and documentation standards 18. Coordinator integrates assessment into SIS and sends it to Co-chairs 19. Co-chairs check final assessment in form and content and inform Coordinator Coordinator checks assessment assessment and feedback approved? Coordinator sends assessment back to 20. Coordinator informs GMAP Team on completion of assessment LA to correct it for final approval 1. GMAP Team checks assessment and map assessment approved? 25. Coordinator informs Co-22. GMAP Team informs RL Unit on completion of assessment chairs, LA and R on assessment publication 23. RL Unit checks assessment in form and content ▼ Yes 24. RL Unit informs Coordinator on assessment RL Unit sends assessment back to publication of assessment and approved? GMAP and Coordinator assessment is published on IUCN website

Description of the different steps in the IUCN Red List Assessment Process

- Either the Cat SG co-chairs decide together with the coordinator if a re-assessment or a new
 assessment of a cat (sub-) species is needed or an assessment is suggested by any person to the Cat SG
 co-chairs or the coordinator. Cat SG co-chairs and coordinator then decide together if an assessment is
 initiated.
- 2. The Cat SG co-chairs define the lead assessor and at least one independent reviewer

3. Coordinator

- contacts the lead assessor and the reviewer
- provides all documents relevant for the IUCN Red List Assessments
- sends the actual species assessment in a IUCN Red List SIS word document to the lead assessor together with an empty IUCN Red List SIS document for the (re-)assessment of the species.
- sends the Conflict of Interest declaration to the lead assessor
- reminds the lead assessor to take full account of all relevant past and available information
- assists the lead assessors to seek the best available data and information
- 4. Lead assessor invites members of the assessor's team
- 5. Lead assessor and members of the assessor's team contact contributors

6. Lead assessor

- sends the list of members of the assessor's team to the coordinator
- completes and signs the Conflict of Interest declaration and assures that such a declaration is completed and signed by all members of the assessor's team and send to the coordinator

7. Coordinator

- informs the lead assessor if further people should be included into the assessment process as members of the assessor's team
- checks if all assessors have signed the Conflict of interest declaration
- 8. Lead assessor compiles together with the members of the assessor's team the assessment (including an updated species distribution map) following the *Guidelines for Using the IUCN Red List Categories* and Criteria and the Documentation Standards and Consistency Checks for IUCN Red List Assessments and Species Accounts, using the IUCN Red List SIS word document
- 9. Lead assessor sends the assessment to the coordinator together with the distribution map and all relevant supporting material
- 10. Coordinator checks if the assessment is complete and formally correct
- 11. If the assessment is ready, the coordinator
 - sends the assessment and all supporting documents to the independent reviewer
 - sends the Conflict of Interest declaration to the reviewer

12. Reviewer

checks the content, completeness and correctness of the assessment especially in regard to the
application of the IUCN Red List Categories and Criteria and species information. A *Review report*is filled out or suggestions and corrections are directly included in the assessment with track
changes

13. Reviewer

- Sends its feedback on the assessment back to the coordinator and to each other
- sends Conflict of Interest declaration to the coordinator.

14. Coordinator

- checks if all reviewer have signed the Conflict of Interest declaration
- formally checks the review
- sends the feedback of the reviewer to the lead assessor.
- 15. Lead assessor (and members of the assessor's team)
 - revises the assessment based on the feedback of the reviewer and states which adaptations were
 made and which suggestions were rejected and why
 - sends the revised assessment to the coordinator.
- 16. Coordinator formally checks the revised assessment (changes made, justification for rejected changes).
- 17. If the assessment is ready, the checks the consistency and completeness of the assessment and if it fulfills the IUCN documentation standards.

18. Coordinator

- integrates the final assessment into the Species Information Service SIS.
- sends the final assessment to the Cat SG co-chairs for approval.

19. Cat SG co-chairs

- check the final assessment in form and content
- give their feedback on the assessment and their approval for its publication to coordinator.
- 20. If the assessment was approved by the Cat SG co-chairs, the coordinator informs the GMAP team about the completeness of the assessment and its submission into the SIS.
- 21. The GMAP team checks the assessment in form and content (criteria use, supporting documentation, consistency, format etc.) and the distribution map
- 22. If the assessment is approved by the GMAP team, they submit it to the RL Unit if it needs further improvement, it goes back to the Coordinator and the LA for corrections
- 23. RL Unit checks the assessment in form and content (criteria use, supporting documentation, consistency, format etc.) and decides on the publication of the assessment on the IUCN Red List of Threatened Species website.
- 24. If the assessment is approved by the RL Unit, they inform the GMAP (or coordinator directly) on its publication. If the assessment needs further amendments, they inform the GMAP (or Coordinator) directly. The Coordinator informs the LA about the needed corrections.
- 25. Coordinator informs the Cat SG co-chairs, lead assessor and reviewer on the publication of the assessment.

Further information on the assessment process is available on the IUCN Red List website.

Guidelines and instructions to lead assessors

It is important that assessments are carefully prepared. Update first all background information and write the assessment rational at the end. Make sure that you included all relevant past and current information and all relevant people. Structure the information according to regions, countries or populations in each section of the assessment.

Please make sure that the assessment is in accordance with the <u>Guidelines for Using the IUCN Red List</u>

<u>Categories and Criteria</u> and that it meets the <u>Documentation Standards and Consistency checks for IUCN</u>

<u>Red List Assessments and Species Accounts.</u>

You will get a copy of the previous published assessment (if available) and a word document called *IUCN Red List SIS* containing a copy of the Species Information Service (SIS) of the IUCN (the system to submit final assessment to the Red List Unit) to do the assessment.

Assessment steps

- Look through the documents and read the <u>Guidelines for using the IUCN Red List Categories and Criteria</u>, the <u>Summary sheet of the IUCN Red List Categories and Criteria</u> and the <u>Documentation Standards and Consistency Checks for IUCN Red List Assessments and Species Accounts</u>. Make sure that you understand the process and the guidelines. If there is anything unclear, please get back to the coordinator.
- 2. Contact species experts/key people from all range countries of the species and invite them to the assessor's team.
- 3. Contact contributors.
- 4. Send the *Conflict of interest declaration* and the *list of members of the assessor's team* to the Red List Authority Coordinator (coordinator). Conflict of interest declaration has to be signed by all the assessors but not by the contributors.
- 5. Compile all available information and data (e.g. on status, population size, population trend, distribution, habitat, habitat trend, ecology, use/trade, threats and conservation measures) or important contextual information relevant to the species.
- 6. Update the assessment using the word document *IUCN Red List SIS*. It is important to update all sections. Structure the information according to regions, countries or populations in each section of the assessment. Fill in all relevant information leaving out for the moment the Rational.
- 7. Prepare an updated species distribution map considering all available data representing the best available depiction of the historical, present and projected distribution of the species.
 - Indicate for each distribution polygon its presence, origin and seasonality code as well as all additionally needed data attributes (<u>IUCN mapping standards</u> p. 9 onwards). Make sure that the Countries of Occurrence on the spatial map and their coding (e.g. extant, possibly extant, possibly extinct, extinct, presence uncertain) are consistent with those listed in the table in the word document *IUCN Red List SIS*.
 - Follow the <u>IUCN mapping standards</u> and calculate EOO and AOO (<u>IUCN RL guidelines</u> p. 46 onwards). To maintain consistency across RL assessments, it is essential to scale estimates of AOO using 2 x 2 km grid cells.
- 8. Look carefully through the assessment and the available information. Assess, in accordance with the IUCN Red List Guidelines, the collected information against as many Red List Criteria as the available

data permit. Based on the validated Criteria assign the corresponding Red List Category to the species and state all Criteria that apply. If several Categories could be applied, please justify why you have chosen a certain Category and not the other one. It is necessary to justify the categorization.

Please keep in mind that for the different Criteria the data quality needed varies (IUCN RL guidelines p. 18 – 19). There are rules for the application of each Criterion which have to be followed for the acceptance of the assessment. For example for Criterion A for a given data source not all combinations of nature of evidence and basis of reduction can be applied (IUCN RL guidelines p. 62). Especially when inferring or projecting a population decline, care has to be taken when making assumptions on the relationship between e.g. habitat loss and population reduction. A sensible use of inference and projection is necessary and made assumptions have to be clearly justified based on evidence (IUCN RL guidelines p. 66 onwards).

For Criteria *C Small population size and decline* to be met only an *observed, estimated* or *projected* continuing decline can be applied. For this Criterion the decline cannot be *inferred* or *suspected* (see Red List Criteria Summary Sheet). To apply subcriterion C1, enough data on both population size and decline rates for the species must be available.

There must always be enough evidence for the threats faced by the species or the likely decline rate of the species to warrant a certain listing.

Also for the Category Near Threatened, certain rules have to be met and the criteria nearly met have to be stated in the justification (<u>IUCN RL guidelines</u> p. 74 onwards).

- 9. Write the Rational. Justify the assessment and the selection of the Category and Criterion/Criteria following the documentation requirements and the guidelines. The selection of the Category and Criteria must be comprehensible. When interpreting and using uncertain data, the attitudes toward risk and uncertainty have to be explained as well as the level of precaution (<u>IUCN RL guidelines</u> p. 20 onwards).
- 10. Update any attachments of the assessment or provide important additional information in a new attachment.
- 11. Send the species assessment to the coordinator. The coordinator will formally check the assessment and get back to you. When the assessment is ready, the coordinator forwards it to the reviewer(s).
- 26. The feedback of the reviewer(s) is sent back to you by the coordinator for revision. You must justify why you reject suggested changes.
- 27. Send the revised assessment back to the coordinator. If there are any issues to be discussed or any discrepancy in the listing of the species between the reviewers and the assessors, the assessment is again send back to you to find an agreement. If the assessment is ready, it will be checked on its correctness in regard to the IUCN Red List documentation standards by the coordinator and afterwards the IUCN SSC Cat Specialist Co-chairs will check the assessment in form and content.
- 28. Finally, the assessment is send to the RL Unit by the coordinator. The RL Unit makes a final check and decides on the publication of the assessment.
- 29. The coordinator will inform you if the assessment has been approved and will get published or if further changes are needed.

Key Documents

Please read the following key documents carefully:

- Guidelines for using the IUCN Red List Categories and Criteria
- IUCN Red List Categories and Criteria
- Red List Criteria Summary Sheet
- Documentation standards and consistency checks for IUCN Red List assessments
- Rules of Procedure IUCN Red List Assessment Process 2017-2020

Please have a look at the definitions of mature individuals, location, generation length and of the Criteria and Categories. All IUCN Red List Guidance Documents, publications, tools, Red list training and spatial data and mapping resources can be found on the IUCN website: https://www.iucnredlist.org/resources/grid.

Mapping

For the production of a distribution map please have a look at <u>the IUCN mapping standards and data</u> <u>quality</u> and the <u>GIS Tools, Software and Recommended Base data</u> provided by the IUCN.

The updated maps must be submitted together with the re-assessment as they will be reviewed too.

Guidelines and instructions to reviewers

Procedure

- 1. You receive the species assessment in a word document *IUCN Red List SIS* from the Red List Authority Coordinator (coordinator).
- 2. The assessment has been prepared by at least one lead assessor together with its assessor's team
- 3. Complete and sign the *Conflict of Interest Declaration* and send it to the coordinator.
- 4. Review carefully the assessment and especially look at its correctness, consistency and completeness as well as the correct application of the IUCN Red List Categories and Criteria.
- 5. Review the species range map and compare it with the provided text for the species' distribution.
- 6. Provide your feedback directly in the document using track changes or by filling in the attached *Review Report*.
- 7. Send the review directly to the coordinator.
- 8. The coordinator will send your review to the lead assessor.
- 9. The lead assessor will revise the assessment together with its assessor's team and will have to justify any rejected changes.
- 10. If there are any issues to be discussed or any discrepancy in the listing of the species between the reviewers and the assessors, the assessment is again send back to the lead assessor to find an agreement.
- 11. If the assessment is ready, it will be checked on its correctness in regard to the IUCN Red List documentation standards by the coordinator and afterwards the IUCN SSC Cat Specialist Co-chairs will check the assessment in form and content.
- 12. Finally, the assessment is send to the RL Unit by the coordinator. The RL Unit makes a final check and decides on the publication of the assessment.
- 13. The coordinator will inform you if the assessment has been approved and will get published

If there are any problems in regard to the Red List Assessment please contact the coordinator.