Steps involved in the IUCN Red List process: pre-assessment, assessment, review, submission and publication on the IUCN Red List

Details of the steps involved in the IUCN Red List process, including work involved in pre-assessment, assessment, review, submission to the IUCN Red List Unit (RLU), and publication on the IUCN Red List.

Step 1: Pre-assessment
In all cases, the starting point is raw data. Data and information may be held in published papers, articles, books and reports, unpublished documents and reports, unpublished data, databases (including the IUCN Red List itself), GIS data, satellite imagery, etc. Prior to the assessment phase, raw data are gathered from across the entire global ranges for the taxa being assessed. Data must be recorded in a format compatible with the standards of the IUCN Red List Categories and Criteria and with appropriate supporting information (as specified in Annex 1). The IUCN Species Information Service (SIS) is the database used to hold all assessments published on the IUCN Red List. Global Assessment teams and Red List Authorities are required to use SIS to compile and manage Red List assessment information (see section E in these Terms of Reference). Red List Partners and other external organizations wanting to submit large numbers of assessments to the IUCN Red List are encouraged to use SIS. If that is not feasible, the data format and transfer mechanism needs to be discussed and agreed with the Red List Unit at the start of any such project, to ensure compatibility with SIS. Individuals who provide data through the pre-assessment phase are termed "Contributors".

1.1 Red List Authorities (RLAs)	1.2 Global Species Programme and Red List Partner projects	1.3 External projects
Pre-assessment work may be done by one RLA member working alone; or a small group of RLA members working together; or through contributions from many/all RLA members and additional experts via a large workshop, e-mail correspondence, an internet-based discussion forum (e.g., discussion fora run by BirdLife International), or via the online SIS. The method used will depend on the number of species being assessed, the number of parties involved, the range of data sources being checked, and the amount of funding available for the project or ongoing updates. The RLA is responsible for deciding which approach to take for data compilation. • The RLA Coordinator prepares the list of taxa to be assessed and checks this against what is already in SIS. If taxonomy needs to be added to or modified in SIS, contact the RLU. • Available data sources are reviewed and current data are compiled in SIS. • Draft range maps are prepared.	**a)** Projects involving data compilation and assessment only: • Project staff members prepare the list of taxa to be assessed and check this against what is already in SIS. If taxonomy needs to be added to or modified in SIS, contact the RLU. • Data sources (from RLAs, other institutions, and literature) are reviewed and current data are compiled in SIS by project staff or expert consultants; • Draft range maps are prepared by project staff or expert consultants. **b)** Projects involving regional capacity-building: • Project staff members prepare the list of taxa to be assessed and check this against what is already in SIS. If taxonomy needs to be added to or modified in SIS, contact the RLU. • A Red List Assessor Training Workshop is held for project participants (experts from specific regions or with particular taxonomic expertise). • Project participants review available data sources, compile current data in a database (e.g., SIS), and prepare draft range maps. Data collection and draft range maps may	As for RLAs, the individual or organization involved is responsible for deciding how they will approach data compilation (see step 1.1).

	sometimes be initiated by project staff, then project participants add to this.	

Step 2: Assessment

All assessments are based on data currently available for taxa across their entire global ranges compiled in step 1. In all cases, assessments must follow the IUCN Red List Categories and Criteria and the guidelines for applying these; both documents are available on the IUCN Red List and IUCN SSC websites). Each assessment must also include appropriate supporting information, as specified in Annex 1.

2.1 Red List Authorities (RLA)	2.2 Global Species Programme and Red List Partner projects	2.3 External projects
Assessments, based on data and range maps compiled in step 1.1, may be carried out by one RLA member working alone; a small group of members working together; or by consensus agreement of a large group of members in a workshop, via e-mail, through an internet-based discussion forum (see step 1.1), or via the online SIS. External experts may also contribute to assessment. RLA members may also be involved in one or more of the Species Programme or Red List Partner projects (see step 2.2).	**a)** Projects involving data compilation and assessment only. If sufficient funds are in place, an assessment workshop can be held: *Assessment workshop*: • At a workshop, experts review data and draft range maps compiled in step 1.2 and provide additional information as necessary. • Project staff members adjust species accounts and maps accordingly. • Experts assess each taxon, often with the guidance of one or more facilitators. *No assessment workshop*: • Project staff and/or species-experts use data and range maps compiled in step 1.2 to prepare draft assessments. • Additional experts invited to comment on draft assessments via email or SIS. *Post workshop/draft assessment preparation*: • Project staff tidy up the species accounts and range maps and invite final comments by experts (via SIS or PDF species accounts posted on secure ftp site). • Experts check assessments, and staff members adjust information, assessments and maps where necessary. • Project staff members carry out checks on assessments to ensure IUCN Red List Categories and Criteria are being applied consistently and that all assessments are appropriately documented.	As for the RLA (see step 2.1), the individual or organization involved is responsible for deciding how they will carry out the assessment. Individuals and organizations may also be involved in one or more of the Species Programme or Red List Partner projects (see step 2.2).

	b) Projects involving regional capacity-building: *Draft assessment preparation:* • Experts trained in step 1.2 prepare draft assessments based on the data and range maps compiled in step 1.2. *Assessment Review Workshop*: • At a workshop, experts review data and range maps compiled in step 1.2, and provide additional information as necessary. • Project staff members adjust species accounts and range maps accordingly. • Experts discuss draft assessments and project staff members adjust assessments if necessary. *Post-assessment review workshop:* • Project staff members tidy the species accounts and range maps and invite final comments by experts (via SIS or email and PDF species accounts posted on secure ftp site). • Experts check assessments and staff members adjust species accounts and maps accordingly. • Project staff members carry out checks on assessments to ensure IUCN Red List Categories and Criteria are being applied consistently and that all assessments are appropriately documented.	

Step 3: Review

All assessments must go through a review process before they can be accepted for publication on the IUCN Red List. This involves at least one expert on the IUCN assessment process reviewing the assessment and agreeing that the data used have been interpreted correctly and consistently, and that uncertainty has been handled appropriately. In addition, for assessments that have not been carried out using the 'criteria calculator' option in SIS (which automatically assigns the criteria triggered from the underlying parameter estimates), the review process checks whether the IUCN Red List Categories and Criteria have been correctly applied and that the parameter estimates and supporting documentation are consistent with the Category and Criteria assigned.

3.1 Red List Authorities (RLA)	3.2 Global Species Programme and Red List Partner projects	3.3 External projects
Each RLA has a Coordinator (formerly referred to as the Focal Point, or Chair in the case of stand-alone RLAs) who is responsible for ensuring that each assessment is reviewed by at least one person (but also see recommendations in Annex 1). • A Reviewer **cannot** also be an Assessor or Contributor for an assessment they are reviewing (but can play the role of a Facilitator). The review process may be carried out through: • The RLA Coordinator contacting appropriate RLA members who are experts on the IUCN assessment process; or • The RLA Coordinator contacting appropriate experts on the IUCN assessment process from outside the immediate RLA (e.g., Global Species Programme staff, or members of another taxonomic or geographic RLA); or • An Assessment Review Workshop involving a small group of RLA members or other experts on the IUCN assessment process; or • In an Assessment Workshop, an individual expert or small group of experts on the IUCN assessment process do independent reviews of assessments carried out by Assessors at the same workshop. For any assessment, review and assessment may not be entirely sequential, as guidance on appropriate interpretation of data and consistent approaches to handling uncertainty may be provided by Reviewers throughout the assessment process.	All global Red List assessments must be reviewed by at least one person (but also see recommendations in Annex 1). • All reviews must involve appropriate RLAs; the RLA may defer the review to the project coordinators. • Project coordinators are responsible for ensuring each assessment is reviewed appropriately. As in step 3.1, assessment and review may be carried out at the same workshop, where an individual or a small group prepares an assessment, and then review is carried out by independent experts on the IUCN assessment process who are also at the workshop. In cases where a new taxonomic group is being assessed, there may not yet be an appointed RLA for that group. In such cases project coordinators may act as Reviewers, provided they have not been involved with the individual assessments in question as either contributors or assessors.	Global assessments resulting from external projects **do not** need to be reviewed before reaching the RLU. RLU staff members will arrange the appropriate review (see step 4.3).

Reassessments

The process for reassessing taxa may differ from steps 1-3 above. Assuming that SIS is being used, the process will typically involve:

- Checking that the taxon to be assessed is the same taxonomic concept previously assessed; if not, appropriate taxonomic changes will need to be made in SIS and the new concept is then assessed for the first time as outlined above;
- Starting with a copy of the previously published assessment as a new draft assessment;
- Collating any new published or unpublished information available (either relevant to the species in question or relevant contextual information), and soliciting additional relevant data and information;
- Editing the data and text fields based on the new and updated information now available;
- Note that any PDF with additional supporting documentation attached to the previous published assessment needs to be reviewed and updated as required and attached to the new draft assessment.
- If new parameter estimates trigger higher, lower or different criteria thresholds, the Red List Category and Criteria are revised either manually or by use of the criteria calculator in SIS;
- The updated and revised information may then be reviewed by species experts (within or beyond the RLA);
- The revised assessments and accounts are reviewed by Red List assessment experts for appropriate and consistent interpretation of data and handling of uncertainty, before submission to the Red List Unit.

Step 4: Submission		
All completed assessments are submitted to the IUCN Red List Unit.		
4.1 Red List Authorities (RLA)	**4.2 Global Species Programme and Red List Partner projects**	**4.3 External projects**
Assessments that are included within a global or regional assessment project are submitted by the RLA coordinator to the project coordinator (see step 4.2) who, in turn, submits completed assessments to the IUCN Red List Unit (RLU) on behalf of the RLA through SIS or via an agreed process. Assessments that **are not** included within a Global Species Programme or Red List Partner assessment project are submitted by the RLA coordinator directly to the RLU. - Additional supporting information, such as tables and figures, which need to be transformed into formatted attachments to the assessments (for an example, see the assessments for *Diceros bicornis* or *Ceratotherium simum*), also need to be submitted to the RLU. RLU staff members will then: - Acknowledge receipt of the assessments. - Conduct a random check of assessments to ensure the Red List Criteria have been applied appropriately. - Conduct a random check to ensure that the appropriate supporting information has been included (see Annex 1) - Transfer long sections of documentation, tables, graphs, etc. to PDF documents to be published alongside the appropriate species account with a direct link to these - Proof-read assessments and correct grammar and spelling where necessary - Contact the RLA Coordinator if any errors or omissions are detected or edits/changes required.	Project coordinators are responsible for: - Checking the Red List Criteria have been applied appropriately for each assessment; - Checking that the appropriate supporting information has been provided for each assessment; - Proof-reading, spell-checks and formatting checks for each assessment; - Checking assessments for overall consistency in application of the Red List Criteria; - Submission of completed assessments to the RLU via SIS including any additional supporting documentation, tables and/or figures. RLU staff members will then: - Carry out final checks (see step 4.1), but to a much lesser extent (since project staff should already have completed these checks). The RLU staff will focus on looking for overlooked errors, and problems in overall consistency between assessment projects. - Notify project coordinators of any errors or issues.	Unreviewed global assessments (including any additional supporting documentation, table and/or figures) resulting from external projects are submitted directly to the RLU via an agreed process. RLU staff will then: - Add the assessments to SIS (if they are not already in the system). - Check the assessments for quality (see step 4.1); - Return poor-quality assessments to those who submitted them with reasons why they are unacceptable for publication on the IUCN Red List. - Refer good-quality assessments to the appropriate RLA or other experts (in cases where no RLA has been appointed to cover the taxon) for review (see step 3.1). - Inform those who submitted the assessments of the outcome of the review, and return any assessments that were not accepted by the Reviewer(s).
Step 5: Publication		
All assessments that have been reviewed, submitted, checked and accepted are entered into SIS (if they are not already in the system) and are published in the appropriate update of the IUCN Red List website (dependent on the date of submission, the quality of the assessments, the number of assessments to be processed and the number of submissions received overall).		

The Red List Process
From Raw Data to Red List

Red List Authority (RLA)
(SGs, Partner organizations, other institutions)

Pre-Assessment (see step 1.1)
RLA members review data sources and compile data appropriate for Red List assessments.

Assessment (see step 2.1)
Carried out by one RLA member working alone; or a small group of members working together; or a large group of members in a workshop; or contributions from the whole membership through a workshop or email/internet forum.

Assessments submitted directly to RLA

Assessment rejected by Reviewers

Review (see step 3.1)
RLA coordinator arranges review by at least one appropriate expert in Red List Assessments

RLA comments returned to Red List Unit

Reviewed assessment accepted by RLA

Unreviewed assessment referred to RLA (see step 3.1)

Problem detected

Global Species Programme & Partner Projects
(Includes Global Biodiversity Assessments and Regional Assessments; often involves RLAs & Partner organizations)

Pre-Assessment (see step 1.2)
Data source review and data compilation done by project staff, expert consultants, and project participants.

Assessment (see step 2.2)
Assessments prepared through workshops, review, consistency checks, etc.

Post workshop review and consistency checks carried out.

Assessment rejected by RLA

Review (see step 3.2)
Project coordinators contact appropriate RLAs to arrange assessment review.

Reviewed assessment accepted by RLA

Consistency Check (see step 4.2)
Project coordinators check criteria use, supporting documentation, consistency, proofreading and formatting before submission to the RLU

Problem detected

Red List Unit

Submission (see steps 4.1, 4.2, 4.3)
Red List Unit scans assessments submitted from above projects for obvious errors and checks consistency between projects.

Red List Unit checks criteria use, supporting documentation, consistency, proofreading and formatting for:
- Reviewed assessments from RLA.
- Unreviewed assessments from outside IUCN SSC network.

Problem detected by RLU / assessment rejected by RLA

Reviewed and checked assessments accepted for publication on Red List

Assessments submitted directly to Red List Unit

Assessment (see step 2.3)
Assessments from individuals working alone, academia, National Red List projects (endemic species), etc.

Pre-Assessment (see step 1.3)
Review of data sources and compilation of data appropriate for Red List assessment

Publication (see step 5)
Assessments added to SIS database and appear on appropriate IUCN Red List web site update.

External Assessors
(Assessors from outside the IUCN SSC networks and Global Species Programme activities)