# Assessing to Plan (A2P): Using the IUCN Red List to its best advantage

## Participants
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## Aim
The aim of this working group session was to explore how we can maximize the systematic and effective completion of the conservation actions section of IUCN Red List assessments, so they provide vital information for linking the assessment process directly through to a process of conservation action planning and delivery.

## Background
CPSG is renowned for its facilitation of conservation planning and 'transforming passion for wildlife into effective conservation'. This has typically focused on single species or population planning; however, CPSG is now up-scaling this work to apply it to multi-species groups. Currently, two objectives of CPSG's work are i) to improve the connection between Red Listing and conservation planning and ii) to develop a tool for moving more species, more quickly, from assessing and into planning (in line with the SSC's ASSESS – PLAN – ACT model. Plate 1).
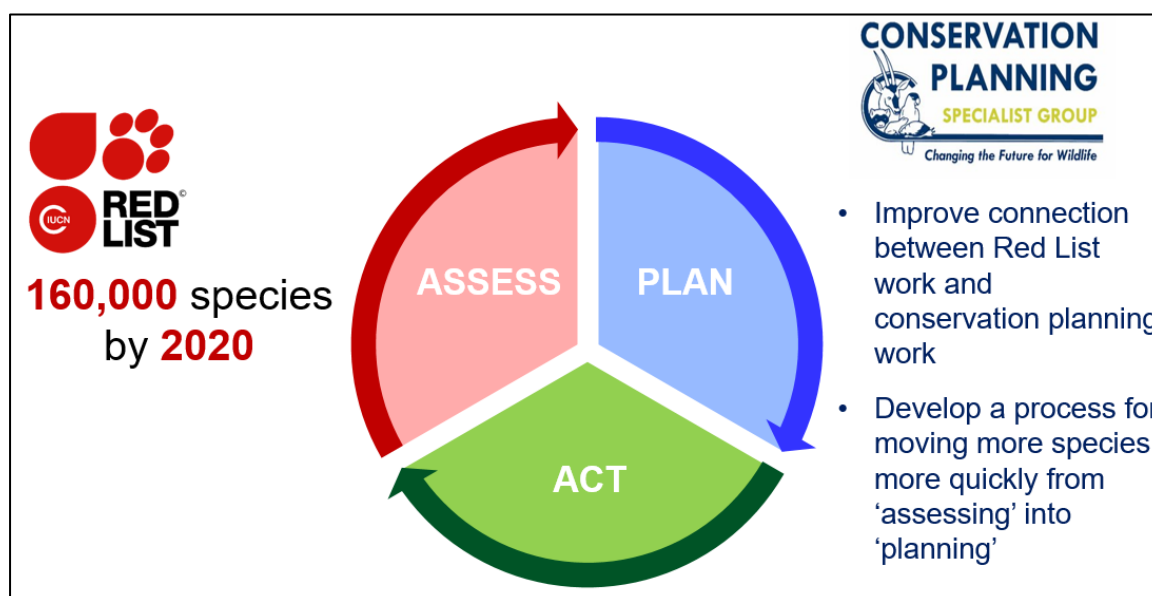


Plate 1. The IUCN SSC's Assess – Plan- Act model

The working group session began with a round of introductions and a brief statement from participants on any previous experience, knowledge, and use of the IUCN Red List or the Red List assessment process they each had. The group was very diverse in these regards, ranging from some with basic searches on the IUCN Red List website through to others who have been involved in species assessments, Red List assessment workshops etc. Every participant had used or been involved with the IUCN Red List in some way.

The working group divided into four sub-groups to brainstorm and report back on the following question:

1. **Based on your understanding/experience, what is (or should be) the role and purpose of the IUCN Red List of Threatened Species[TM]?**

The responses have been collated below. It quickly became apparent that there was a broad consensus and shared understanding between the four groups:

- It is a general data hub/database, which provides a source of information to the scientific community, general public, policy makers etc, on species including their distribution, locality, threats, conservation actions and risk of extinction
- It assesses, quantifies and reports on the extinction risk of individual species
- It allows for regular reassessment of species status
- Allows us to track changes in the status of species over time
- It is a credible authority, based on science
- It provides a standardized, consistent assessment protocol (applies the same methodology across taxa), so is a comparable tool across species
- It helps us understand the reasons for the threat category assigned to species
- Provides information to track trends:
    o Across taxa over time
    o Per species over time
    o Used for publicity in highlighting the status of the world's biodiversity and particular species of conservation concern
- It assesses conservation retrospectively
- Tool for guiding conservation planning and prioritization
- Guiding development and decision-making
- Advising CITES
- Able to be used for change - attitude/influential
- Allows for prioritization of species for conservation action
- Provides indicators on the status of biodiversity
- Conservation
- It should assess wild and captive status (full picture of how species are doing)

We then looked at the working group's collective responses against the IUCN Red List's actual documentation on the background to and uses of the IUCN Red List of Threatened Species[TM] (see https://www.iucnredlist.org/about/background-history and https://www.iucnredlist.org/about/uses), and concluded that the group also had a generally good agreement with the defined role and purpose of the IUCN Red List.

A brief presentation on the IUCN Red List website, assessment process, and the IUCN Species Information System was then provided to the group, highlighting the following:

**The IUCN Red List**
The IUCN Red List of Threatened Species[TM] provides a universally recognized, global approach for assessing the extinction risk of the world's animal and plant species. Each species assessment is generated based on an analysis of a wide range of information including habitat and ecology, population status and trends, geographic distribution, use & trade and threats, to determine the appropriate Red List category for a species. To ensure uniformity across Red List assessments and to allow the underlying data of assessments to be analyzed, a set of standard terms, 'Classification Schemes' (for threats, habitats, conservation actions needed, and research needed) have been developed for documenting taxa on the IUCN Red List.

Within each species assessment, there is a comprehensive section for inputting information on conservation actions currently in place, and for those that are needed. Potentially, this could provide a huge leap for many species, to springboard them from the assessment phase into the most appropriate conservation action planning.

However, these fields are not mandatory for the assessment and so are often only partially completed. Therefore, there can be a huge variation between species assessments in terms of the degree to which the conservation section has been completed (Plate 2).
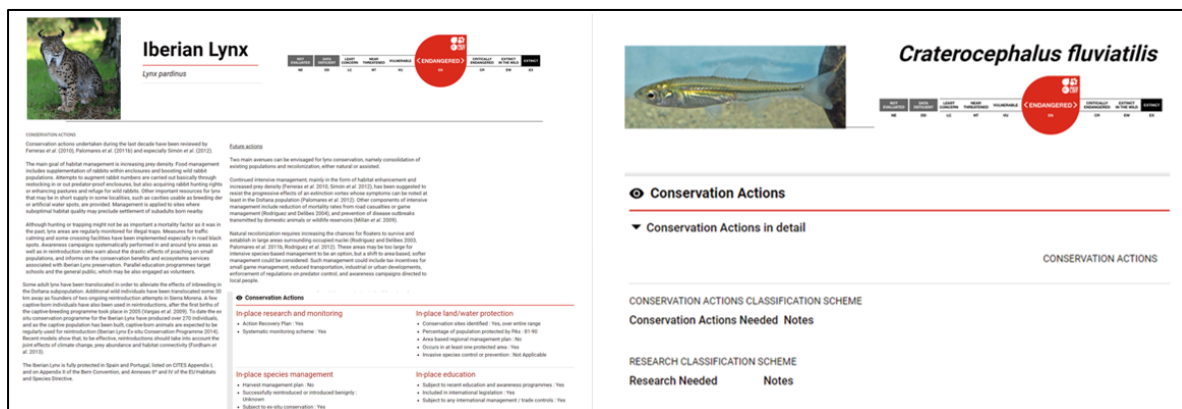


Plate 2. The Conservation Actions section of Red List assessments for two Endangered species, as an example of the variation in the level of documentation provided in this section.

Further challenges have been identified, such as a preliminary analysis of a sample of records from the Red List database show a disconnect between the threats listed as impacting on species and the kinds of conservation action recommended, suggesting that the data may require additional review before adoption for conservation action planning. Also, the Red List data potentially tell us what conservation action is needed, but not where it is needed, or who might take it forward, which again suggests that an extra layer of work is required to maximize the value of this information for conservation action planning. Another significant factor to consider is that the Red Listing process frequently happens separately from conservation planning activities, meaning these two intrinsically-linked processes end up being disconnected.

This discussion was followed by a brief presentation on the upcoming IUCN Red List assessment workshop for the freshwater fishes of the Sunda region, which provides an opportunity to develop and trial a process that allows Red Listing and the first phase of conservation planning to be carried out simultaneously.

**Opportunity: IUCN Red List assessment workshop for the freshwater fishes of the Sunda region**

IUCN SSC CPSG have been invited to the Red List workshop for freshwater fishes of the Sunda region, which is being organized by the IUCN Freshwater Biodiversity Unit, hosted by Wildlife Reserves Singapore and taking place at the end of January 2019. CPSG is attending the workshop specifically to incorporate a process for completing the conservation section of assessments for all species assessed as threatened and have been developing the method for this.

Summary of progress to date:
1. In order to assess the conservation actions needed, key information required from each species Red List assessment includes i) geographic location (scaled to country level, location level and site level), ii) threats, iii) conservation actions in place, and iv) any conservation actions already selected in the draft assessment and v. Red List threat category and criteria.

2. In order to ensure consistency across species where relevant (e.g. for species living in the same water body and therefore which threats are affecting them and the subsequent conservation actions needed), key information needs to be reviewed across multiple species at the same time. However, the Red List workshop process typically requires assessors to go through individual species assessments one-by-one.

3. The report generator in the IUCN SIS database provides a detailed taxonomic hierarchy for each species within the entire working set (1,073 species in this instance) and their Red List category and criteria (Plate 3). However, none of the other information identified as key for the 'conservation actions' session is provided in the dataset summary.



**Plate 3. An example of the excel working set report generated through the SIS database, which summarizes information on taxonomic hierarchy and Red List category and criteria for each species**

4. Therefore, a template has been designed that allows the key information to be reviewed, queried and consistency-checked across all threatened species (Plate 4). Unfortunately, all this information must be copied from each individual species assessment, and entered into the template, which is a little time-consuming!

5. Once the conservation sections have been completed, assessors will recommend the most appropriate planning path for each species or group of species. Four 'buckets' have been identified into which species are sorted. These are i) single species recovery planning; ii) habitat recovery-based planning; iii) threat-focused recovery planning; and, iv) planning for *ex situ* conservation management (Plate 5). These 'buckets' are not mutually exclusive and for some species, the most appropriate bucket may have been identified (e.g. where the most effective next steps for a particular species would be for it to be covered by conservation planning focused on addressing a major threat), but it may also fall into another bucket (e.g. if the species also occurred at a site that was identified as requiring planning around habitat-recovery).

6. Workshop participants will also identify key stakeholders required to be involved in the next steps of taking the conservation planning forward. A report on the outcomes of the conservation planning work at the Sunda fish workshop will be produced and sent to these identified stakeholders for further engagement and follow-up.

Plate 4. The Threats - Conservation matrix template for threatened freshwater fishes of the Sunda region



Plate 5. Threatened freshwater fishes of the Sunda region will be directed to the most appropriate route for the next phase of conservation planning.

There was a brief discussion about the upcoming workshop and the group agreed that the template for reviewing the threats – conservation – geographic location information for all threatened species would be useful. There was interest within the group for trialing the template with other multi-species groups (e.g. corals).

Having now fully considered:
- the Red List assessment process and its full potential for assessing conservation actions needed;
- CPSG's objectives to improve the connection between Red Listing and conservation planning and to develop a tool for moving more species, more quickly, from assessing and into planning;
- the Sunda fish workshop as a case study; the working group went back into their four subgroups and had between 10-20 minutes to brainstorm and then 5 mins report back on each of the following three questions:

1. How does the Red List currently help us (CPSG) with conservation planning and the prioritization of conservation action?

2. Where/how/why does the Red List currently not meet our (CPSG) needs for conservation planning and the prioritization of conservation action?

3. What would we (CPSG) like to see change with the Red List process to enable it to reach its full potential in support of conservation planning and prioritizing conservation action (Assess-Plan-Act)?
    - An ideal future state
    - Big, bold ideas
    - Learnings from other existing tools/resources
    - Integration/connectivity with other tools/resources

The group responses have been collated and are provided below:

**How does the Red List currently help us (CPSG) with conservation planning and the prioritization of conservation action?**

- Basic package of information, go –to – place
- Starting point for resources of information
- Tells you which species are at highest risk
- Provides relevant information on geographic range, status, threats etc (when all questions are answered)
- Provides information on what is currently being done to help the species (when all questions are answered)
- Identifies the knowledge gaps for research and conservation action
- Informs about status and threats
- Informs on conservation needs - first rapid prioritization, first idea, first tool, but deeper research would be required
- Uses standardized terminology and process
- Criteria leading to the Category tells us why a species has been assigned with that level of threat category (e.g., based on population decline, reduction in geographic range etc).
- Tells you which species occur in the same region for clustering of species
- Red list Category helps us to prioritize/cluster species for next step
- Text descriptions help us to plan for planning (contains more detail to explain selections made from classification schemes)

- Different sections are more valuable depending on the type of planning (multispecies vs single species)
- Identifies if a species has already had planning
- Revision date gives an indication for the likely reliability of data category and information in the assessment
- Process important – connecting all people and networking/collaborative – bringing people together
- Provides networking opportunity between stakeholders with relevant knowledge and expertise
- Keep "Conservation Planning" as an option

**Where/how/why does the Red List currently not meet our (CPSG) needs for conservation planning and the prioritization of conservation action?**

- Threats not geographically mapped
- Threats not generally prioritized
- No requirement to identify conservation actions needed
- No explicit link between conservation actions and threats – instructions?
- Conservation planning is currently listed as a 'research action' – which is not where it should be and doesn't give the attention to planning that it deserves.
- Single species focus is a limitation
- Very difficult to extract the data needed for planning – not user-friendly
- Limited extraction/clustering abilities in SIS (e.g. species affected by the same threat in the same place etc.)
- Unable to pull out data to look at the overlap of species with a similar distribution.
- There is not a good communication/overlap with other databases (CITES, Studbooks etc.)
- No mention of CITES category, international conventions, protection status in regions, range countries
- Lack of useful linkages to other useful listings (e.g. ecosystem Red List etc.)
- Not all sections are necessarily answered, resulting in large information gaps.
- Fields that are voluntary like conservation action become less useful and sometimes 'dangerous' (is it unknown, ignored, not-consistently thought about; taught; filled in?)
- The length of the time for the full process
- Frequency of re-assessment or updates. Re-assessments are not done often enough, e.g. to pick up issues form rapidly emerging diseases, natural disasters etc.
- There are a large number of non-evaluated species
- Dependence on volunteers is a limitation in how much time/focus can be given to Red Listing
- Not all the right people are necessarily involved (e.g. can be a tendency towards more taxonomists and academics rather than field conservationists)
- List all the assessors with email ID for contact. How are assessors, contributors, reviewers decided?
- Insufficient attribution/referencing contributors
- The actual data that the assessment is based on is not openly available
- Unsure of the transparency of the review and validation process
- Process – lack of transparency & consistency in the identification of assessors, contributors, and reviewers.
- It is species–level, but does not look at the whole picture, does not link to the root causes
- Focus is too much on the global assessment, so it is not as useful for the regional planning (LC species may be going regionally extinct)
- Discrepancies between status at local vs global scale
- Only includes the status of wild populations in natural range (not introduced population or *ex situ* status

- *Ex situ* actions not explained very well
- Conservation actions options related to *ex situ* don't reflect the current IUCN SSC guidelines. Now you can only choose population restoration and underneath that only *ex situ* propagation or bio-banking. Population restoration is just one of possible *ex situ* roles and the guidelines detail many more roles for *ex situ* than you can tick in the Red List. Ticking a box of "*ex situ* conservation" is as informative as a box for '*in situ* conservation' (doesn't say much).
- No *ex situ* module

**What would we (CPSG) like to see change with the Red List process to enable it to reach its full potential in support of conservation planning and prioritizing conservation action (Assess-Plan-Act)?**

- Raw data not available, provide all the data so it is public
- Give the contact information/database for expert assessors
- "Comment' field on assessment with name & institution (more integrative) – comments not reviewed
- Environmental parameters (what are the factors affecting them?)
- Conservation actions fields need to be mandatory
- The Red Listing process could include recommendations for actions by stakeholders.
- Follow up on the conservation actions that are listed - a function that lets people sign up online to be responsible for certain actions so that they can be contacted
- Constant planning updates to assure real tangible results.
- Results of the conservation actions should feed directly into the next assessment
- Immediate transfer of relevant peer reviewed published-information/new reports being integrated into the Red List so data is as up-to-date as possible (as used by marketers).
- Search terms across database text
- More detailed querying, query customized by the user, user-friendly
- A more sophisticated search capability that can generate the kind of spreadsheet developed by Claudine – or something very like it - as an IUCN tool for multiple species (geographic/taxonomic/habitat/ecological niche/threat). And you can find out which species been assessed to need the same thing in the same place. Or the ability to suggest associated species also affected by threats to your focal species.
- Machine-readable datasheets
- Machine-learning, robot assessment, AI
- Linking of/communication with other databases such as CITES, Species360, etc.
- Real-time global database (like ZIMS for wild populations, flagging if there is a change or new information)
- At the moment there is no linkage between species entries and between IUCN databases; e.g. if a lake suddenly dries up (or has some other problem cropping up), you should be able to get an alert or whatever to all the species that are associated with the lake. Or if an entire reef system has declined 20% that has consequences for the species in it. E.g. linkage with ecosystem databases or Species360 database. At the very least, the IUCN should be able to inter-link with all of their databases.
- Integrate with other priotization schemes (AZE, EDGE, Climate change)
- More focus on insects, or less attractive species, species going extinct because they depend on other species
- More plant specialist groups and other groups like invertebrates
- Summary stats that give you a quick overview on a selected region (data visualisations, e.g. overlaps etc.)
- Ability to create a map that combines the distribution of different species.

- A concept of rapid assessment so that you can get around the issue that for those species that you know are very common you still need to do that time-consuming thing of a detailed assessment for those clearly not threatened species.
- In SGs, there should be *in situ, ex situ* planning specialists (need variety of people)
- More engagement with national and regional IUCN offices
- Establish network in each region and country (establishing IUCN units per country)
- Close links between CPSG + IUCN regional/country offices and/or CBD focal points
- Ability to link to/incorporate Red List data from national biodiversity databases (more and more countries have these and, in some cases, quite sophisticated) -– (may need to be validated?)
- More funding needed for Red Listing
- In RL unit, have 1 planner to facilitate the process towards planning

**Key actions / next steps / recommendations**

1. A briefing document, detailing key points and suggestions created by the working group on potential ways the Red List database and Red Listing process may be adapted and fully utilized to better meet the needs of the conservation planning community, will be prepared and presented to the IUCN SSC Red List Committee for consideration.

2. The working group strongly recommended that training and support of Red List assessors and facilitators during the Red Listing process is enhanced, so that the conservation actions section of species assessments are completed fully and consistently to maximize their potential for spring-boarding threatened species into conservation planning. Essentially, 'Assessing to Plan' should become a mandatory part of the Red List assessment process.

3. The group would like to see the development of an objective process for evaluating recommendations for *ex situ* conservation actions needed.

4. The working group saw huge potential with the Sunda fish multi-species assessment template. Other taxa groups would like to explore its use (e.g. corals, mixed-Philippine species and otters).