

sDiv working group meeting report

"sRedList"

"sRedList - Accelerating IUCN Red List assessments for rapid and effective biodiversity monitoring"

14 - 16 March 2022

The sRedList Working Group gathered for three days between the 14 and 16th of March 2022 to discuss the recent advances and future steps of the Working Group. The three main objectives of the workshop were to (1) Discuss advances and orientation of the four ongoing research projects, (2) Discuss the development and future release of the platform that is being developed by the Working Group, (3) Think about the future strategy of the Working Group.

Research projects:

There are four ongoing research projects within the sRedList Working Group. These projects all emerged from research needs identified during the first workshop and are detailed in the recent perspective paper published by the Working Group ([Cazalis et al. 2022, TREE](#)). The advancement of each of these research projects was presented and discussed in a plenary session, followed by breakout group sessions with collaborators of each project to discuss specific methodological questions.

Pablo Lucas (postdoctoral researcher in Sapienza University, Rome) presented his work on modelling the extinction risk of amphibians in order to help prioritise reassessments of this taxa. This project has final results and is currently in the writing phase. We can expect it to be submitted in 2022.

Victor Cazalis (postdoctoral researcher in iDiv, Leipzig) presented his work on modelling the probability of Data Deficient species to be reclassified in a data sufficient category, in order to help assessors prioritise the reassessment of Data Deficient species. Preliminary results were presented and the group discussed several methodological questions, and the applicability of this project in connection with the platform being developed by the Working Group. We expect the study to be submitted in 2022.

Giordano Mancini (PhD student in Sapienza University, Rome, supervised by Moreno Di Marco and Luca Santini) presented the plan for his first PhD project, which will aim at developing an easy and standard estimate of species exposure to climate change to provide to assessors. The group discussed the methodology that could be applied to combine accuracy, fit with Red List guidelines, and simplicity. A methodology was agreed by the group and will guide the next steps of this project. Giordano Mancini will be a guest at iDiv for six months in late 2022, to collaborate with Victor Cazalis on this project. A first draft will be produced during this period.

Etienne Henry (Masters student in iDiv, Leipzig) presented the plan for his project to model the probability of a given species to be threatened according to each Red List criterion. The group decided

to focus on birds in a first step and discussed several methodological questions regarding the choice of covariates and the way to deal with uncertainty in the response variable. First results are expected in June and a first draft of a manuscript later in the year 2022.

Platform development:

The applied objective of the sRedList Working Group is to develop an online platform that will support Red List assessors with tools to estimate Red List parameters, fill up different fields with automated analyses, prioritise assessments, draw range maps, etc. Following the conclusion of the first workshop (March 2021), this has been started in September through a collaboration with LifeWatch Italy who hosts the platform and helps to transform the code developed by the sRedList Working Group into an interactive platform.

Luca Santini presented the recent developments on the platform. The current version can use as input the Red List range polygons, polygons uploaded by users, or create a polygon from data automatically retrieved from GBIF database. The platform then uses the range polygon and species habitat preferences to calculate the Extent of Occurrence of the species and its Area of Habitat (which can be used in Red List assessments as an upper bound for Area of Occupancy) as well as the trends in the Area of Habitat. The group provided specific feedback on how to improve the current version of the platform and agreed on a list of 22 items to resolve before running a first test with a few assessors (starting with members of the Working Group). We expect this first test to be possible in two months.

The group then elaborated a list of the next functionalities to develop in the platform for the first public release of the platform that is expected in January 2023. This list includes 26 items going from small additions to the current pipeline to important additional modules or functionalities (e.g., enable a batch use of the platform, or calculating habitat fragmentation within the range).

Next steps:

The group agreed on the next steps for the research plans and for the platform development. The year 2022 will be dedicated to publishing the four above-mentioned papers and developing the first version of the platform to be released by the end of the second year of the Working Group.

The group discussed the importance of having a third year extension, which would be key to have time for the interaction with platform users. Indeed, this will enable updating the platform according to the feedback that we will receive from users. Additionally, the group will need this third year to publish a paper presenting the platform and its use by Red List assessors, and to focus on fundraising (grant writing/submission) in order to ensure a longer life span to the initiative.

Workshop format:

The workshop was overall very much appreciated by participants. The group on site was very happy to finally meet after one full year working only remotely and to interact in both formal and informal times. The interaction with online participants was possible and convenient thanks to iDiv infrastructure and

technical help, although it does not replace in person meetings and is more difficult to follow for online participants. The group really appreciated sDiv support and service, for both meeting and extra-meeting times.

An iDiv seminar was given on Wednesday by Moreno Di Marco with more than 60 participants, to present the project and outputs of the Working Group to the iDiv community.

The group decided to have a small online meeting before the end of the year (October-November) to discuss the advances and prepare the first release of the platform to assessors. Later (January-March 2023), another meeting in iDiv can be planned to discuss the advances and projects for the third year (if funded). It could also be an opportunity to invite external persons, such as Red List assessors to test the platform in live, or people who will help develop the training material for the platform.