



# **2022 Report** of the IUCN Species Survival Commission and Secretariat



Stand-alone report IUCN SSC Global Freshwater Macroinvertebrate Sampling Protocols Task Force The IUCN Species Survival Commission (SSC) is a science-based network of thousands of volunteer experts from almost every country of the world, all working together toward achieving the vision of "a just world that values and conserves nature through positive action to both prevent the loss and aid recovery of the diversity of life on earth."

Members of SSC belong to one or more of near 200 Specialist Groups, Red List Authorities, Action Partnerships, Task Forces, and Conservation Committees that make up the Network, each focusing on a taxonomic group (plants, fungi, mammals, birds, reptiles, amphibians, fishes, and invertebrates), national species, or a disciplinary issue, such as sustainable use and livelihoods, translocation of species, wildlife health, climate change, and conservation planning.

Framed by the Species Conservation Cycle, SSC's major role is to provide information to IUCN on biodiversity conservation, the inherent value of species, their role in ecosystem health and functioning, the provision of ecosystem services, and their support to human livelihoods. This information is fed into the IUCN Red List of Threatened Species.

#### 2021-2025 Species Strategic Plan

The IUCN Species Strategic Plan encompasses the joint work of the IUCN Species Survival Commission and a number of partnerships to achieve more than 2,700 targets proposed by the Network during the 2021-2025 quadrennium. To accomplish those targets, the Species Conservation Cycle was established, which is the conceptual framework for the Network activities. The Species Conservation Cycle's main purpose is to guide efforts for valuing and conserving biodiversity through three essential components that are linked to each other:

**ASSESS:** Understand and inform the world about the status and trends of biodiversity. **PLAN:** Develop collaborative, inclusive and science-based conservation strategies, plans and policies.

**ACT**: Convene and mobilise conservation actions to improve the status of biodiversity.

# ASSESS ACT PLAN

Their implementation requires two transversal components:

**NETWORK:** Enhance and support our immediate network and alliances to achieve our biodiversity targets.

**COMMUNICATE**: Drive strategic and targeted communications to enhance our conservation impact.

#### **SSC Species Report**

Annual progress in the implementation of the 2021-2025 Species Strategic Plan is documented in the SSC Species Report, which consists of a comprehensive description and analysis of the activities and results generated by the members of the SSC Network each year. Each SSC Group contributes to this document by providing a yearly summarised description of their achievements, which is presented in stand-alone reports.

# Structure of the IUCN SSC Stand-alone Report

Stand-alone reports summarize the activities conducted and results generated by each group member of the SSC. Following, is the structure of the stand-alone report and the contents under each session.

#### Title of the SSC Group

## Photograph(s) of the Chair / Co-Chairs

#### **Group information**

Includes names of Chair / Co-Chairs, Vice-Chairs, Deputy Chairs, Red List Authority Coordinators and Program Officers, their institutional affiliations, number of members and social networks currently active.

## Logo of the SSC Group

#### **Mission statement**

Includes the mission of the group.

# Projected impact for the 2021-2025 quadrennium

Includes the description of the impact on species conservation resulting from the implementation of the targets formulated by the group for the 2021-2025 quadrennium.

#### Targets for the 2021-2025 quadrennium

Includes the targets planned by the SSC Group for the 2021-2025 quadrennium ordered alphabetically by component of the Species Conservation Cycle. Each target is labeled with a numerical code (e.g., T-001, T-012) that identifies it in the SSC DATA database and its status for the reported year is indicated (Not initiated, On track or Achieved).

## **Activities and results**

Includes the targets for which activities were conducted and results were generated during the reported year, ordered alphabetically, first by component of the Species Conservation Cycle, and second by Activity Category. Description of activities and results includes the indicator that best describes progress, its associated quantitative or qualitative result, and the narrative description of the activity conducted or result obtained. Each activity or result reported is linked to the Key Species Result to which it is mainly associated (e.g., KSR#1, KSR#5).

#### Acknowledgements

Includes the acknowledgements to funding agencies, partners, and persons who contributed to the progress of the targets of the group.

#### **Summary of achievements**

Summarises information of the group's strategic plan for the quadrennium and progress achieved implementing targets for all the components of the Species Conservation Cycle during the reported year.

# Animalia

# Fungi

Plantae

**National Species** 

Disciplinary

Action Partnership

Task Force

**Red List Authority** 

Committee

**Center for Species Survival** 

#### Example for the recommended citation:

Simaika, JP, and Bruder, A. 2023. 2022 Report of the Global Freshwater Macroinvertebrate Sampling Protocols Task Force. In: Nassar, JM, García, L, Mendoza, L, Andrade, ND, Bezeng, S, Birkhoff, J, Bohm, M, Canteiro, C, Geschke, J, Henriques, S, Ivande, S, Mileham, K, Ramos, M, Rodríguez, A, Rodríguez, JP, Street, B, and Yerena, E (Eds.). 2022 Report of the IUCN Species Survival Commission and Secretariat. International Union for Conservation of Nature. 4 pp



# 2022 Report

# **IUCN SSC Global Freshwater** Macroinvertebrate Sampling **Protocols Task Force**







CO-CHAIR John P. Simaika IHE Delft Institute for Water Education. The Netherlands Stellenbosch University, Western Cape, South Africa

CO-CHAIR Andreas Bruder University of Applied Sciences and Arts of Southern Switzerland. Bellinzona, Switzerland

# **Mission statement**

Invertebrates are functionally vital to aquatic ecosystems and can indirectly or directly affect human health and wellbeing. The IUCN SSC Task Force on Global Freshwater Macroinvertebrate Sampling Protocols (GLOSAM) aims to: (1) support the application of bioassessment based on benthic freshwater invertebrates, and (2) establish efficient bioassessment schemes through the standardisation and coordination of sampling protocols across countries.

# Targets 2021–2025

## ASSESS

T-002 Identify protocols used in other countries and regions and obtain copies for use in this project.

Status: On track

T-003 Establish global overview of macroinvertebrate protocols, including the history of their origin, regulatory context - constraints, traditions - and use. Status: On track

T-004 Translate into English protocols that are written in a language other than English. Status: Not initiated

T-005 Participate in developing an agreed plan and timetable for completing the harmonisation of the protocols. Status: Not initiated

T-006 Participate in setting criteria for assessing the suitability of sampling protocols in biodiversity assessments of freshwater ecosystems.

Status: Not initiated

NUMBER OF MEMBERS

15

T-007 Participate in developing guidelines for adjusting sampling effort in using suitable protocols for biodiversity assessments.

Status: Not initiated

T-008 Evaluate one or more sampling protocols using the agreed criteria and guidelines. Adapt the criteria and guidelines based on case studies. Status: Not initiated

T-009 Contribute to the writing of the harmonised protocol document and a scientific manuscript describing these protocols and exploring their contribution to regional and global assessments of freshwater biodiversity. Status: On track

T-010 Translate the harmonised protocol in other languages when this is a requirement for its adoption and application in other countries and regions. Status: Not initiated

## NETWORK

T-001 Network within and beyond SSC and grow the membership of the Task Force. Status: On track

**T-011** Promote the harmonised protocol in respective countries, regions and networks. Status: Not initiated

# Activities and results 2022 ASSESS

# Communication

T-003 Establish global overview of macroinvertebrate protocols, including the history of their origin, regulatory context - constraints, traditions - and use. (KSR 5)

Report summarising global overview of macroinvertebrate protocols, including the history of their origin, regulatory context and use: 0

Result description: We have created a first overview of the protocols for macroinvertebrate bioassessment and biodiversity assessments in streams and lakes around the globe. We have identified gaps in the coverage or information of such protocols in the different countries/regions.

#### **Red List**

T-009 Contribute to the writing of the harmonised protocol document and a scientific manuscript describing these protocols and exploring their contribution to regional and global assessments of freshwater biodiversity. (KSR 6)

Number of technical documents provided to support Red List assessments/reassessments: 0

Result description: We have started a scientific manuscript providing an overview of macroinvertebrate bioassessment and biodiversity assessment protocols for streams and lakes around the world.

#### **Research activities**

**T-002** Identify protocols used in other countries and regions and obtain copies for use in this project. (KSR 5)

Number of identified protocols: 10

Result description: Members have continued to assess protocols used in different countries and regions towards a global overview (draft publication). The GLOSAM drafted and published a survey on the national and sub-national existence of biodiversity monitoring and ecosystem condition assessment protocols in use nationally and regionally, i.e. sub-nationally.

# NETWORK Membership

**T-001** Network within and beyond SSC and grow the membership of the Task Force. (KSR 2)

Number of SSC members recruited: 5

Result description: In 2022, we grew the Task Force further. Apart from the 13 core group members, who participate in regular meetings and activities, we also have a five-member advisory to GLOSAM. These are Bruce Chessman (Monash University, Australia), Ken Irvine (Institute for Water Education, The Netherlands), Kristian Meissner (Finnish Environment Institute, Finland), Astrid Schmidt-Kloiber (University of Natural Resources & Life Sciences, Austria), and Eren Turak (New South Wales Department of Planning and Environment, Australia).

#### Summary of achievements

Total number of targets 2021-2025: 11 Geographic regions: 11 Global Actions during 2022: Assess: 3 (KSR 5, 6)

Network: 1 (KSR 2)

#### Overall achievement 2021-2025:

