



Species

ISSUE 64

2023 Report of the IUCN Species Survival Commission and Secretariat



The IUCN Species Survival Commission (SSC)

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.



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 and Centers for Species Survival (CSS) each year. Each SSC and CSS 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 and CSS Stand-alone Reports

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

Title of the group

Photograph(s) of the Chair/Co-Chairs

Group information

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

Logo of the 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 or CSS 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:

Hughes, K. and Zimmerman, B. 2024. 2023 Report of the Freshwater Fishes Specialist Group. In: IUCN SSC and Secretariat. *2023 Report of the IUCN Species Survival Commission and Secretariat*. Gland, Switzerland: IUCN. 6 pp.

IUCN SSC Freshwater Fishes Specialist Group



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NUMBER OF MEMBERS
138

SOCIAL MEDIA AND WEBSITE

Facebook: [FreshwaterFishSpecialistGroup](#)
LinkedIn: [IUCN SSC Freshwater Fish Specialist Group](#)
X: [@kathyahughes](#), [@TopiltzinCM](#),
[@jorg_freyhof](#), [@LabRajeev](#)
Website: <https://freshwaterfish.org/>

Mission statement

To be the global forum for people pursuing the conservation of freshwater fishes.

Projected impact 2021–2025

The Freshwater Fish Specialist Group (FFSG) will: (1) lead and support the science upon which freshwater fish conservation can succeed; (2) support best practice *in situ* conservation for freshwater fishes; (3) support best practice *ex situ* conservation for freshwater fishes; (4) strengthen the link between freshwater fish conservation science and policy to support impactful policy decision making; (5) raise awareness and engagement on freshwater fishes, and (6) inspire the next generation of fish scientists and conservationists.

Targets 2021–2025

ASSESS

T-024 Assist IUCN Freshwater Biodiversity Unit in completing Red List conservation status assessments of all freshwater fishes (ca. 18,000 species). This includes supporting reassessments, assessments of newly described species, and review of Red

List 'Recommended Conservation Actions' for freshwater fish and identification.
Status: On track

T-025 Expand taxonomic, geographic and ecosystem coverage of freshwater fishes included in WWF's Living Planet Index (LPI); ensure FFSG member involvement in at least two publications on Freshwater LPI.
Status: On track

T-039 Review FFSG Steering Committee and membership opportunities to increase participation of early career members.
Status: On track

PLAN

T-026 Collate a reference list of existing *in situ* conservation practices/activities to inform best practices that achieve results.
Status: Not initiated

ACT

T-033 Review Red List 'Recommended Conservation Actions' for freshwater fish that would benefit from *ex situ* management and link with facilities to ensure each species is considered and included where possible.
Status: On track

NETWORK

T-018 Update the current FFSG membership list with confirmed profiles/contacts.
Status: Achieved

T-019 Identify and engage Regional/Thematic leads to cascade/gather information.
Status: On track

T-020 Conduct gap analysis for geographic/species group/thematic representation and work with the Steering Committee to fill critical gaps.
Status: On track

T-021 Identify existing connections across IUCN (e.g., across all Commissions) that relate to freshwater fish and engage/align with those groups.
Status: Achieved

T-023 Host periodic get-togethers. The aim would be to hold these in person, but realistically they will likely be via webinar due to COVID-19 and budget.
Status: On track

T-027 Identify conservation practitioners working on *in situ* conservation for freshwater fishes and invite them to become members of FFSG.
Status: Achieved



Giant Freshwater Whipray
(*Urogymnus polylepis*) in the Mekong River
Photo: Zeb Hogan

T-029 Contact zoos/aquaria/breeding centres working on *ex situ* conservation for freshwater fishes; identify contacts and add to membership.
Status: On track

T-030 Link FFSG website to websites of European Association of Zoos and Aquariums (EAZA), Association of Zoos & Aquariums (AZA), European Union of Aquarium Curators (EUAC), universities, research institutes and others working on *ex situ* conservation.
Status: On track

T-037 Represent freshwater fish biodiversity on fisheries platforms (i.e., Inland Fisheries Alliance; InFish) via research and publications.
Status: Achieved

T-040 Seek advice from those experts in youth engagement, including SSC, Synchronicity Earth, and Bristol Zoological

Society (BZS), and follow advice that will enable us to reach early career members.
Status: On track

T-042 Review and update the Group's work plan.
Status: Achieved

T-043 Re-establish the Steering Committee of the Freshwater Fishes Specialist Group.
Status: Achieved

COMMUNICATE

T-022 Ensure up-to-date website facilitates knowledge sharing between members and between members and wider audiences.
Status: Achieved

T-028 On the FFSG website, publish quarterly (spotlight/in-focus) articles on conservation projects around the world related to freshwater fish conservation.
Status: On track

T-031 Post Regional Collection Plans for freshwater Teleost on the FFSG website (create a page on the FFSG website for *ex situ* work).
Status: On track

T-032 Through a conference session at the International Aquarium Congress (IAC), create a new platform for engaging directly with public aquaria and zoos to initiate joint proposals based on resource needs and shared objectives.
Status: Achieved

T-035 Act as a conduit between freshwater fish scientists and decision-makers (i.e., Ramsar, Convention on Biological Diversity [CBD] and freshwater fish scientists, and policy influencers (i.e., Conservation International, WWF, Alliance for Freshwater Life) to ensure that freshwater fishes are considered in major policy decisions (i.e., CBD, Ramsar) and that recommended conservation actions are implemented.
Status: On track

T-036 Engage with key strategic coalitions and campaigns, including Shoal's INSPIRE, the Alliance for Freshwater Life and World Fish Migration Day.
Status: Achieved

T-038 Update the FFSG website to become an up-to-date and flexible knowledge-sharing platform.
Status: Achieved

T-041 Support Freshwater Conservation Committee communications highlighting freshwater species at risk and threats to freshwater systems.
Status: Achieved

Activities and results 2023

ASSESS

Red List

T-024 Assist IUCN Freshwater Biodiversity Unit in completing Red List conservation status assessments of all freshwater fishes (ca. 18,000 species). This includes supporting reassessments, assessments of newly described species, and review of Red List 'Recommended Conservation Actions' for freshwater fish and identification. (KSR 6)

Number of global Red List reassessments completed: 1,600

Result description: Of the ca. 1,800 freshwater fish species assessments published in 2023, around 1,600 were assisted through help from FFSG, either through assessment, review, or recommending reviewers in the region. Around 1,500 assessments were from South America, and around 100 from India and Pakistan.

Another 300 freshwater fish species assessments from South America were submitted in 2023 for publication in 2024, with the aid of FFSG members.

[SSC Grant awarded]

Research activities

T-025 Expand taxonomic, geographic and ecosystem coverage of freshwater fishes included in WWF's Living Planet Index (LPI); ensure FFSG member involvement in at least two publications on Freshwater LPI. (KSR 5)

Number of scientific publications about species research that acknowledge SSC affiliation: 0

Result description: In the absence of PhD students who can dedicate time to improving the representation of freshwater data in the LPI, other projects took priority. Especially, additional data were added to the LPI database for migratory fish, led by ZSL in collaboration with the World Fish Migration Foundation, WWF US, TNC and Wetlands International. Some FFSG members/Steering Committee members were involved in this collaboration. The migratory fish report will be released in May 2024, with a publication to follow in the coming year (2025). There has not yet been any progress with analyses of LPI data on fished species for an inland fisheries analysis that includes also results from the IUCN Global Freshwater Fauna Assessment.

Synergy

T-039 Review FFSG Steering Committee and membership opportunities to increase participation of early career members. (KSR 5)

Review and promote diversity (in particular youth but also to consider gender and regional representation) within FFSG: Ongoing.

Result description: Several new members of FFSG are early-career freshwater fish specialists. We have also recruited an intern to work with us on drafting our relaunched newsletter and some non-fish specialist early-career professionals to help with this as well as administrative tasks.

ACT

Conservation actions

T-033 Review Red List 'Recommended Conservation Actions' for freshwater fish that would benefit from *ex situ* management and link with facilities to ensure each species is considered and included where possible. (KSR 10)

Number of threatened species benefiting from *ex situ* conservation action: 3

Result description: A funding proposal was prepared and submitted to SSC for an *ex situ* conservation plan for the Endangered Trichonis Goby from Greece. The Hellenic Centre for Marine Research is collaborating on this project with FFSG Co-Chair Brian Zimmerman. The EAZA zoos/aquarium community is actively pursuing the establishment of *ex situ* populations of key species and a recent Indianapolis Zoo Saving Species Challenge submission was created by a collaboration of zoo/aquarium partners in the UK, US and Mexico and led by the Zoological Society of London for the reintroduction of three Extinct in the Wild Pupfish species to Mexico. Chester Zoo staff recently produced a draft of Best Practice Guidelines for the Licorice Gouramis in *ex situ* facilities.

NETWORK

Membership

T-019 Identify and engage Regional/Thematic leads to cascade/gather information. (KSR 2)

Active steering committee taking ownership of the task: Ongoing.

Result description: Monni Bohn has taken on the role of Membership Lead and is implementing the new membership recruitment process successfully. Although not a Steering Committee Member, Abby Lynch works closely with FFSG in her roles at IFA and InFish and she helped to secure a part-time volunteer intern (Jason Motely) for FFSG. We have Jason until May 2024. In addition, Brian Zimmerman has secured the voluntary capacity of assistant Caitlin Daly from BZS which has resulted in the first FFSG newsletter since 2017 being published (December 2023). Kathy Hughes recruited Lesley Wright as a volunteer to manage the FFSG website.

T-020 Conduct gap analysis for geographic/species group/thematic representation and work with Steering Committee to fill critical gaps. (KSR 2)

Number of SSC members recruited: 20

Result description: There is good geographical representation both within the Steering Committee and the FFSG membership as a whole. In the last year, we have increased the number of public aquarium/zoo representatives in membership. These align with European, North American and Asian zoo associations and the members have taxonomic expertise within certain families. Overall, the group now has 138 members on the portal although, due to challenges in

getting members added, this actual number is higher (~162). We will be working to add those members to the portal who are not yet registered.

T-023 Host periodic get-togethers. The aim would be to have these in person, but realistically these will likely be via webinar due to COVID-19 and budget. (KSR 2)

Positive feedback from membership: Ongoing.

Result description: Although we were unable to host in-person meetings in 2023, we did conduct online steering group meetings twice in 2023, in June and December, with two meetings on each day to account for time zone differences. The meetings were minuted and drafts were sent to attendees for feedback.

T-027 Identify conservation practitioners working on *in situ* conservation for freshwater fishes and invite them to become members of FFSG. (KSR 2)

Number of SSC members recruited: 20

Result description: We have added a further 20 members in 2023.

T-029 Contact zoos/aquaria/breeding centres working on *ex situ* conservation for freshwater fishes; identify contacts and add to membership. (KSR 3)

Increase in members from the zoo/aquarium community that are working in *ex situ* and *in situ* freshwater fish conservation: 3

Result description: Several new members were recruited from the public aquarium/zoo sector – these are coordinators of *ex situ* breeding programmes in EAZA zoos/aquariums and manage an entire family, focussing on species that need conservation with an *ex situ* component. Recruits include coordinators for Cichlids, Licorice Gouramis, and Goodeids.

T-030 Link FFSG website to websites of European Association of Zoos and Aquaria (EAZA), Association of Zoos and Aquariums (AZA), European Union of Aquarium Curators (EUAC), universities, research institutes and others working on *ex situ* conservation. (KSR 3)

Established links between the FFSG website and *ex situ* members: 2

Result description: The newly launched FFSG website is now linked to the European Union of Aquarium Curators website, under the Freshwater Teleost TAG page. Several members of FFSG are also EUAC members and this number is likely to grow in the future. The FFSG website is now also linked to the EAZA Freshwater Teleost TAG page.

Synergy

T-021 Identify existing connections across IUCN, e.g., across all Commissions, that relate to freshwater fish and engage/align with those groups. (KSR 2)

Alignment with related SSC groups of relevance: Ongoing.

Result description: FFSG has invited the Chairs from the Salmonid, Anguillid and Sturgeon Specialist Groups to sit on our Steering Committee. We have specifically increased interaction with the Anguillid and Salmonid groups. We have close links with the FW WPCA Specialist Group and specifically support the FW Specialist Group outcomes.

T-037 Represent freshwater fish biodiversity on fisheries platforms, i.e. Inland Fisheries Alliance; InFish, via research and publications. (KSR 4)

Freshwater Fish biodiversity recognised by freshwater fisheries representatives: 1

Result description: Kathy Hughes sits on the monthly Inland Fisheries Alliance Advisory Group meetings. Kathy Hughes and Fisheries Adviser Professor Ian Cowx sit on the monthly InFish knowledge-sharing calls and represent biodiversity issues. We have a clear narrative of risk, in alignment with the fisheries community. Kathy Hughes and Ian Cowx attended the World Fisheries Congress, where Kathy launched the Mekong Forgotten Fishes report (report coalition includes FFSG, Inland Fisheries Alliance and InFish, as well as Conservation International and others).

COMMUNICATE Communication

T-022 Ensure up-to-date website facilitates knowledge sharing between members, and between members and wider audiences. (KSR 12)

Platform for communication of our activities: Ongoing.

Result description: The new [FFSG website](#) was launched in September 2023, it remains active and has had seven news articles added since it was created. The website is funded by BZS and content is managed by Lesley Wright of the Otter Specialist Group.

T-028 On the FFSG website, publish quarterly spotlight/in-focus articles on conservation projects around the world related to freshwater fish conservation. (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 1

Result description: The FFSG has published seven news items on the FFSG website since it was launched in September 2023. As a major milestone in our communications, we have also produced our first [FFSG newsletter](#) since 2017 and it was published in May 2023. To date, the Chairs have lacked the capacity to manage specific articles to put on the website and have been unable to engage others to do so. We anticipate we will continue as we are currently delivering – with news articles and a newsletter.

T-031 Post Regional Collection Plans for freshwater Teleost on the FFSG website (create a page on the FFSG website for ex situ work). (KSR 13)

Number of print communications materials distributed in relation to specific taxonomic groups: 0

Result description: The Regional Collection Plan for EAZA zoos/aquariums will be uploaded to the FFSG website in 2024.

T-035 Act as a conduit between freshwater fish scientists and decision-makers (i.e., Ramsar, Convention on Biological Diversity [CBD]), and freshwater fish scientists and policy influencers (i.e., Conservation International, WWF, Alliance for Freshwater Life) to ensure that freshwater fishes are considered in major policy decisions (i.e., CBD, Ramsar) and that recommended conservation actions are implemented. (KSR 12)

Number of communications and meetings attended: 1

Result description: The FFSG supported and then led the CMS discussion which resulted in the inclusion of two migratory Catfishes in the CMS Appendix. The FFSG has supported Catherine Sayer (IUCN) to identify other migratory fishes for CMS inclusion. The FFSG has supported the Mekong Forgotten Fishes report (reach 1.1bn) to advocate for the implementation of an emergency recovery plan for freshwater fishes of the Mekong.

T-036 Engage with key strategic coalitions and campaigns, including Shoal's INSPIRE, the Alliance for Freshwater Life and World Fish Migration Day. (KSR 12)

Participation in partnership coalitions: 2

Result description: The FFSG supported the creation of Shoal's 2023 New Species Report and supported the Mekong Forgotten Fishes report and coalition, and CMS advocacy. The Alliance for Freshwater Life (AFL) was dormant in 2023, and the World Fish Migration Day (WFMD) did not take place in 2023; it has been planned for May 2024.



Mezquital Pupfish (*Cyprinodon meeki*)
Photo: Brian Zimmerman

T-038 Update the FFSG website to become an up-to-date and flexible knowledge-sharing platform. (KSR 13)

External platform for FFSG communications developed: Ongoing.

Result description: The website was launched in September 2023 and is now an active platform for the FFSG.

Scientific meetings

T-032 Through a conference session at the International Aquarium Congress (IAC), create a new platform for engaging directly with public aquaria and zoos to initiate joint proposals based on resource needs and shared objectives. (KSR 12)

Number of presentations delivered in scientific events: 0

Result description: Freshwater Teleost TAG sessions were held at both the EAZA general meeting in Helsinki, Finland and at the EUAC general meeting in the Azores, Portugal. Both sessions were well attended.

Acknowledgements

The FFSG would like to acknowledge the support of the FFSG Steering Committee – Chairs and Advisers – and Shoal for their significant support towards achieving our objectives during the last year. In addition, we wish to specifically acknowledge the support of Monni Bohm for her help with reporting, Lesley Wright for helping to set up our new website, and Jason Motely and Caitlin Daly for their support in creating the FFSG newsletter.

Summary of achievements

Total number of targets 2021–2025: 25

Geographic regions: 23 Global, 2 Europe

Actions during 2023:

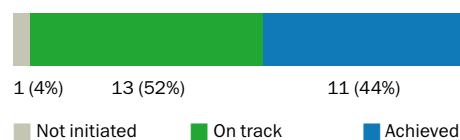
Assess: 3 (KSR 5, 6)

Act: 1 (KSR 10)

Network: 8 (KSR 2, 3, 4)

Communicate: 7 (KSR 12, 13)

Overall achievement 2021–2025:





Nothobranchius fuscotaeniatus
Photo: Csenge Nagy



Tetra Parnaiba
Photo: Karina Molina



Trioceros hoehnelii
Photo: Christopher V. Anderson



Sternberia lutea
Photo: Hayri Duman



Egretta rufescens
Photo: Ernesto Gómez



Lactifluus neotropicus
Photo: Aida Vasco



Mayfly nymph (*Ecdyonurus* sp.)
Photo: Astrid Schmidt-Kloiber and Wolfram Graf