



Species

ISSUE 65

2024-2025 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 that were generated during 2024 (full year) and 2025 (first quarter), 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:

Quintana, Y, and Knapp, C.(2025). 2024-2025 Report of the CSS Freshwater - Shedd Aquarium. In: IUCN SSC and Secretariat. *Species: Annual Report of the IUCN Species Survival Commission and Secretariat 2024-2025*. Gland, Switzerland: IUCN. 8 pp.

2024-2025 Report

CSS Freshwater - Shedd Aquarium



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Mission statement

The mission of the Center for Species Survival: Freshwater is to use applied conservation practices to inform assessments and safeguard freshwater species and environments. Work within the Center includes collaboratively assessing the extinction threat faced by freshwater species to identify the highest conservation priorities and create unified strategic Plans, while working with IUCN SSC Specialists Groups and other partners to Act on reversing declines to safeguard freshwater biodiversity.

Projected impact 2021–2025

Increase awareness on the importance of conserving freshwater biodiversity, while collectively increasing local capacities and knowledge on threatened species, contribute to Red List assessments, and develop a strong collaborative network that promotes freshwater conservation.

Targets 2021–2025

ASSESS

T-001 Conduct a comprehensive gap analysis on threatened species based on the Global Red List of Threatened Species

and the National Lists of Endangered Species in Guatemala, El Salvador, and Costa Rica.

Status: On track

T-002 Investigate freshwater biodiversity in Central America using holistic approaches in collaboration with Central American stakeholders

Status: On track

T-003 Increase research efforts on Data Deficient (DD) freshwater fishes in Guatemala, El Salvador and Costa Rica, with a special focus on endemic species.

Status: Not initiated

T-004 Contribute to the Red List assessments of freshwater fish species classified as Not Evaluated (NE) and DD, including primary and secondary species in Central America.

Status: Not initiated

T-005 Contribute to the Red List assessments of freshwater mussels in Central America.

Status: Not initiated

T-006 Conduct a KBA gap analysis in Guatemala, El Salvador, and Costa Rica.

Status: Not initiated

T-007 Identify KBAS in Central America.

Status: Not initiated

PLAN

T-008 Identify candidate species or countries with the potential for developing conservation action plans.

Status: Not initiated

ACT

T-009 Provide an aquatic conservation and research training program for the next generation of conservation science practitioners aligned with global standards established by the IUCN.

Status: Achieved

T-010 Implement a coalition on freshwater mussel conservation in Central America.

Status: On track

T-011 Facilitate a project on freshwater mussel reproduction, i.e. *ex situ*-reared population, at Universidad de San Carlos de Guatemala.

Status: On track

NETWORK

T-012 Establish a partnership among the Morton Arboretum, the Field Museum of Natural History and Shedd's applied conservation programs to initially seed collaborative partnerships and facilitate capacity building in Central America.

Status: On track

Training undergraduate students
on freshwater survey techniques
Photo: J. García



Capacity building program for the next
generation of conservation scientists
Photo: Y. Quintana



Mussel survey in Honduras
Photo: Y. Quintana

T-013 Collaborate with Central American stakeholders to organise a regional symposium to disseminate current knowledge on freshwater topics, strengthen cross-country collaborations, and discuss conservation needs and priorities.

Status: On track

T-014 Work with coordinators from the KBAS, Red List, Conservation Planning, and freshwater-related working groups to identify high-level opportunities to implement the Species Conservation Cycle and the 2021-2025 Species Strategic Plan.

Status: On track

T-015 Promote and facilitate the participation of Mesoamerican researchers in the IUCN SSC - Mollusc and Freshwater Fish Specialist Groups.

Status: Achieved

COMMUNICATE

T-016 Work collaboratively across the network of Centers – to share updates on CSS: Freshwater’s progress and find opportunities for joint storytelling to highlight unique partnerships – and maximise local, regional, national and international awareness with key media targets.

Status: On track

T-017 Disseminate the work of Shedd’s Center for Species Survival: Freshwater

in Central America in collaboration with in-country partners.

Status: Achieved

T-018 Leverage Shedd’s growing platform of existing media relationships, owned communications channels, civic connections and access to onsite guests to build awareness of the CSS: Freshwater’s work and underscore the broader network and partnership with the IUCN SSC.

Status: On track

T-019 Disseminate the work of Shedd’s Center for Species Survival: Freshwater to the SSC Network by contributing quarterly reports and at least one longer-form article for the annual IUCN SSC report.

Status: On track

T-020 Collaborate with Reverse the Red on an ongoing basis, supplying examples of work from the CSS: Freshwater to celebrate efforts to protect vulnerable aquatic species.

Status: On track

Activities and results 2024-2025

ASSESS

Research activities

T-001 Conduct a comprehensive gap analysis on threatened species based on the Global Red List of Threatened Species and

the National Lists of Endangered Species in Guatemala, El Salvador, and Costa Rica. (KSR 6)

Number of countries assessed: 0

Result description: We expanded the gap analysis to gain a better understanding of freshwater conservation in Mesoamerica. In addition to analysing freshwater fish conservation gaps, we conducted the survey ‘Mapping freshwater biodiversity and ecosystems conservation efforts in Central America’. The survey was completed by 90 people and provided insights into ongoing conservation efforts and needs in the region, and identified opportunities to develop a Mesoamerican Freshwater Conservation Alliance.

T-002 Investigate freshwater biodiversity in Central America using holistic approaches in collaboration with Central American stakeholders. (KSR 5)

Number of surveys: 6

Result description: In 2024, we conducted surveys to investigate freshwater mussel diversity and distribution in Costa Rica, El Salvador, and Guatemala, in collaboration with the University of Costa Rica, the El Salvador Ministry of Environment, and the University of San Carlos of Guatemala,



Workshop “Best Practices for Aquarium-Based Conservation”
Photo: I. Franco

respectively. We also conducted a freshwater macroinvertebrate survey with local partners (University of Costa Rica, Finca Cantaros, Soy Conservacion and Mujeres Comprometidas con la Tierra) to investigate the impact of forest restoration in the Cotón River, where the CSS: Trees is supporting forest restoration. In 2025, we conducted a freshwater mussel survey in Honduras and Guatemala with our partners for the Autonomous University of Honduras and the University of San Carlos de Guatemala, respectively.

ACT

Conservation actions

T-009 Provide an aquatic conservation and research training program for the next generation of conservation science practitioners aligned with global standards established by the IUCN. (KSR 10)

Number of people trained: 155

Result description: We are providing continued capacity training for 13 researchers and students from Guatemala, El Salvador, and Costa Rica, who collaborate with the Center. Beyond this core group, our capacity-building initiatives have engaged more than 140 people across the Mesoamerican region. In 2025, we initiated additional capacity training with freshwater mussel surveys in Honduras, including two researchers from the Autonomous University of Honduras.

Synergy

T-009 Provide an aquatic conservation and research training program for the next generation of conservation science practitioners aligned with global standards established by the IUCN. (KSR 10)

Number of training sessions: 10

Result description: Together, with partner organisations across Central America, we strengthened freshwater conservation capacity through a series of workshops, field trainings, and academic collaborations. In total, we delivered four workshops and three field experiences for faculty, technicians, and students from Guatemala, El Salvador, and Costa Rica. These workshops titled ‘Characterisation of Freshwater Clams: Species Identification and Barcoding’ and ‘Using Macroinvertebrates to Assess River Health’ combined hands-on fieldwork with laboratory training. A two-day workshop on ‘Freshwater Fish Life History Strategies’ at the Universidad de San Carlos de Guatemala, featuring both theoretical and coding sessions. We co-hosted and promoted the ‘Guatemala COP16 Preparatory Workshop’, a focused dialogue on freshwater conservation priorities with key national stakeholders. We also convened regional dialogues at the 2024 IUCN Regional Conservation Forum and the Society for Conservation Biology Conference, focused on the role of freshwater biodiversity in the CBD and the Kunming-Montreal Global Biodiversity Framework, in partnership with the IUCN SSC Freshwater Conservation Committee. Additionally, we continued to support a Master’s student at the University of Costa Rica who is developing expertise in the study of freshwater mussels, including a six-week residency at Shedd Aquarium to learn about molecular techniques and data analysis. In 2025, Shedd’s Animal Care – Aquarium Teams, provided a workshop

on ‘Best Practices for Aquarium-Based Conservation and Reintroduction of Freshwater Biodiversity’ at the University of Guatemala. The workshop trained 26 participants from government, academic, and non-governmental institutions. Additionally, we provided two hands-on experiences on fish and mussel surveys, including undergraduate students and researchers from Guatemala and Honduras.

T-010 Implement a coalition on freshwater mussel conservation in Central America. (KSR 10)

Number of participants involved: 6

Result description: We connected with mussel experts in Guatemala, El Salvador, Honduras, and Costa Rica to promote a regional collaboration for mussel research. Each researcher is leading surveys in their own country and producing national checklists. Together, these efforts will generate key information and contribute to the Red List assessment in partnership with the IUCN SSC Mollusc Specialist Group.

NETWORK

Membership

T-015 Promote and facilitate the participation of Mesoamerican researchers in the IUCN SSC - Mollusc and Freshwater Fish Specialist Groups. (KSR 2)

Number of SSC members recruited: 4

Result description: We promoted and facilitated the inclusion of experts from Costa Rica, Guatemala, and El Salvador who are collaborating with the CSS: Freshwater into the IUCN SSC Mollusc Specialist Group. In addition, Shedd’s mussel expert also joined the Group.



CSS's panel at the 5th IUCN SSC Leaders' Meeting
Photo: C. Knapp

Synergy

T-012 Establish a partnership among the Morton Arboretum, the Field Museum of Natural History and Shedd's applied conservation programs to initially seed collaborative partnerships and facilitate capacity building in Central America. (KSR 1)

Number of 'in-kind' partnerships established and maintained: 8

Result description: In Costa Rica, we partnered with Prof Yolanda Camacho and Prof Monika Springer at the University of Costa Rica, to conduct research and facilitate capacity-building activities on freshwater mussels and aquatic insects, respectively. Our collaboration with Prof Springer is part of a joint project with the Morton Arboretum's Center for Sustainable Trees (CSS: Trees), which aims to assess the impact of forest restoration on the biodiversity of the Coton River. This initiative also involves local environmental organisations, including the Finca Cantaros Environmental Association, Soy Conservación ('I am conservation'), and their community programme, Mujeres Comprometidas con la Tierra (Women Committed to the Earth). In Guatemala, we are collaborating with the University of San Carlos of Guatemala's Center for Marine Studies and Aquaculture and the University Center in Zacapa to expand our biodiversity surveys across the country and provide training opportunities. Additionally, we have partnered with the Guatemala Limnology Association to co-host conferences, workshops, and panels to raise awareness about freshwater conservation. One of our recent collaborations is with

the University of El Valle of Guatemala's Center for Environmental and Biodiversity Studies, which will host the Freshwater Conservation Mesoamerican Symposium in 2025. In El Salvador, we continue our work with the Ministry of Environment to support ongoing freshwater mussel research, and in Honduras, we have initiated a new partnership with the IBIOAH Research Institute at the National Autonomous University of Honduras. Through this collaboration, we are expanding our freshwater mussel surveys and capacity-building efforts in the country. As our Center strengthens its work in Central America, we are also deepening our partnership with The Field Museum in Chicago to provide capacity-building opportunities both in Chicago and across Central America.

T-014 Work with coordinators from the KBAS, Red List, Conservation Planning, and freshwater-related working groups to identify high-level opportunities to implement the Species Conservation Cycle and the 2021-2025 Species Strategic Plan. (KSR 3)

Number of collaborations through partnerships: 4

Result description: In 2024, we expanded and strengthened our collaborations within the IUCN SSC network, including the Freshwater Conservation Committee, the CPSG - Mesoamerica, the Mollusc Specialist Group, and Reverse the Red. Outcomes included our participation in the World Species Congress hosted by Rtr and the satellite event co-hosted with the Freshwater Conservation Committee, a joint effort with CPSG focal point in Costa Rica to connect with key partners in Costa Rica and plan potential CPSG support to develop

a regional collaborative plan for freshwater conservation in Mesoamerica. Also, we connected with the Mollusc Specialist Group to engage in different efforts, such as increasing the knowledge of freshwater mussels for further Red List assessment.

COMMUNICATE Communication

T-016 Work collaboratively across the network of Centers - to share updates on CSS: Freshwater's progress and find opportunities for joint storytelling to highlight unique partnerships - and maximise awareness locally, regionally, nationally and internationally with key media targets. (KSR 13)

Number of collaborative stories placed in highly visible, reputable and prestigious media outlets: 3

Result description: Worked in partnership with the Center for Species Survival: Trees for one joint storytelling opportunity to celebrate the progress of both Centers since their establishment in 2023. This update included creating and disseminating a joint press release, social media posts, and an update in Shedd's eNews newsletter - alongside other communications from The Morton Arboretum, including the Daily Herald article 'Morton Arboretum, Shedd Aquarium report conservation progress after one year as global Centers for Species Survival'.

T-017 Disseminate the work of Shedd's Center for Species Survival: Freshwater in Central American in collaboration with in-country partners. (KSR 12)

Number of media articles mentioning IUCN Species theme: 3



Workshop on surveying mussel techniques
Photo: Y. Quintana

Result description: The Center disseminated work through the following publications: (1) [First research on freshwater clams launched in Costa Rica](#); (2) Morton Arboretum, Shedd Aquarium report conservation progress after one year as global Centers for Species Survival. [Daily Herald](#). The Center's Director, [Dr Knapp was interviewed](#) by ABC7 Chicago to talk about the Species Pledges contributed to Reverse the Red.

T-018 Leverage Shedd's growing platform of existing media relationships, owned communications channels, civic connections and access to onsite guests to build awareness of the CSS: Freshwater's work and underscore the broader network and partnership with the IUCN SSC. (KSR 13)

Number of people reached and engaged: 2,100,000

Result description: Leveraged four unique moments to recognise and share with the public updates on the progress of the Center for Species Survival: Freshwater, reaching an estimated 2.1 million people. This included generating more than 101,000 impressions, including more than 3,000 in likes, comments and engagements across 15 different social media posts. These communications included: (1) Creating social media posts, an eNews update in our public newsletter and a joint press release to celebrate the one-year anniversary of the Center's establishment; (2) Highlighting our involvement in the World Species Congress through a satellite event, internal comms, an IUCN SSC quarterly report submission, inclusion in our eNews newsletter and social media posts;

(3) Leveraging Hispanic Heritage Month to generate social media posts about the focus of the Center and Dr Quintana's leadership, and (4) Pursuing and securing recognition for Dr Quintana in Crain's Chicago Business's list of Notable Latino Leaders, resulting in media placements and social media posts.

T-019 Disseminate the work of Shedd's Center for Species Survival: Freshwater to the SSC Network by contributing quarterly reports and at least one longer-form article for the annual IUCN SSC report. (KSR 12)

Number of Species e-bulletin, Save Our Species newsletter, SSC Groups' newsletter editions produced: 2

Result description: Published the note 'Freshwater mussel project in Central America' on the Mollusc SG newsletter *Tentacle* No. 32. In 2025, we contributed with the note 'Rediscovering Guatemala's Freshwater Mussels', to the Mollusc SG Newsletter *Tentacle* No. 33, in collaboration with partners.

Number of reports submitted: 5

Result description: In 2024, we submitted three QR report contributions and completed the 2023 Report of the IUCN Species Survival Commission and Secretariat. In 2025, we submitted the 2024 Report of the IUCN Species Survival Commission and Secretariat.

T-020 Collaborate with Reverse the Red on an ongoing basis, supplying examples of work from the CSS: Freshwater to celebrate efforts to protect vulnerable aquatic species. (KSR 13)

Number of digital communication outputs developed in relation to specific taxonomic groups: 4

Result description: We contributed to the World Species Congress through the video 'Surveying and recovering mussels', and the virtual satellite event 'Towards a Mesoamerican Freshwater Species Conservation Alliance' focused on conservation initiatives for freshwater species, co-hosted with the IUCN SSC FCC. Internally at Shedd, we celebrated the World Species Congress via a watch party, internal communications to staff, social media channels, and in our eNews newsletter. In 2025, Shedd Aquarium made Reverse the Red Species Pledges for 28 species, including freshwater mussels from the Midwest in the U.S. and Central America. Alongside other Chicago institutions we highlighted this effort and Rtr through different media outlets, [a press release](#).

Scientific meetings

T-017 Disseminate the work of Shedd's Center for Species Survival: Freshwater in Central America in collaboration with in-country partners. (KSR 12)

Number of presentations delivered in scientific events: 10

Result description: Gave presentations at various events, including the IUCN Regional Conservation Forum in Mexico, the Reverse the Red World Species Congress, the I Panamerican Congress of Invasive and Non-native Aquatic Species, the IUCN SCC Leaders meeting, and the Society for Conservation Biology Latin America and the Caribbean Region, among other events.



Hands-on fieldwork experiences for the young science practitioners. Photo: Y. Quintana

Acknowledgements

We thank the IUCN SSC Chair's Office for its invaluable guidance and unwavering support in advancing freshwater conservation at the international level. We also appreciate the Walder Foundation for its generous funding to support the work in the Center. Also, we are immensely grateful to Shedd's team for their continued support in amplifying the visibility of our work and fostering partnerships with the IUCN SSC and other esteemed organizations. We thank the Freshwater Conservation Committee for helping advance collaborative work in various events within and outside the IUCN network. Special thanks to the dedicated teams at the Morton Arboretum's CSS Trees, the Indianapolis Zoo's Global CSS, and CSS New Mexico BioPark Society for their fellowship and support. Our heartfelt thanks also go to our partners from the University of Costa Rica, the El Salvador Ministry of Environment, the University of San Carlos of Guatemala Center for Marine Studies and Aquaculture and University Center in Zacapa, the Center for Environmental and Biological Studies - University of the Valle of Guatemala, the Research Institute on Environmental and Biological Sciences - Autonomous University of Honduras, Finca Cantaros Environmental Association in Costa Rica and the Guatemala Limnology Association. Together, we are committed to highlighting the paramount importance of freshwater biodiversity and tirelessly working towards its conservation in Central America.

Summary of achievements

Total number of targets 2021–2025: 20

Geographic regions: 5 Global, 15 America

Actions during 2024-2025:

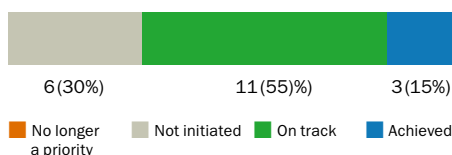
Assess: 2 (KSR 5, 6)

Act: 3 (KSR 10)

Network: 3 (KSR 1, 2, 3)

Communicate: 7 (KSR 12, 13)

Overall achievement 2021–2025:



Suweon Treefrog
(*Dryophytes suweonensis*)
Photo: Amael Borzee



Marsh Cinquefoil
(*Comarum palustre*)
Photo: Magnus Goransson



Phallus aureolatus
Photo: Juliano Baltazar



Eurasian Griffon (*Gyps fulvus*)
Photo: Andre Botha



Black Rhino (*Diceros bicornis*)
Photo: Save The Rhino Trust Namibia



Azores Nursery Spider
(*Pisaura acoreesins*)
Photo: Paulo A.V. Borges



Black and White Snapper
(*Macolor niger*)
Photo: David B. Snyder