

SAVING SANDFISH PROJECT UPDATE: SEPTEMBER 2022

Tagged fish return to the Biedouw

The highlight of the year has undoubtedly been the return of 77 two-year old sandfish from the Doring up into the Biedouw during the September 2022 spawning migration. These fish were tagged and released into the Biedouw River in September 2021 after being rescued in the Biedouw in 2020 and spending their first year of life in the sanctuary dams at Enjo, Bushmanskloof and Mertenhof. This return rate of 8% is higher than expected and has boosted the wild sandfish spawning population in the Biedouw by ~30% - a significant and positive step towards preventing sandfish extinction and rebuilding the wild spawning population.



New sandfish sanctuaries

Four new sandfish sanctuary dams have been established over the past year, including Hartbesluit Dam in the Biedouw Valley, Suifer Dam at Bushmanskloof, Alpha Excelsior Dam in De Pakhuys and Driefontein Dam near Niewoudtville in the Northern Cape. An estimated 30 000 bluegill were removed from the Hartbesluit Dam using Rotenone. Sandfish stocking has commenced in Driefontein, Suifer and Alpha Excelsior Dams, and the remaining dams will be stocked during the 2022 sandfish rescue in November.



Local community assists with fish rescue

7 386 young sandfish were rescued from the Biedouw over summer 2021/22 and relocated to five sanctuary dams. This brings the total number of rescued fish to over 15 000. The fish rescue was a collaborative effort between scientists, conservationists, farmers, community members and school groups. Four members of the nearby Heuningvlei community were trained and employed to assist with the fish rescue. Fifteen MSc students from the University of Cape Town and 10 high school students from Cedar House School also participated in the rescue.



Fish surveys in Doring River and tributaries

New data from 30 sites in the Biedouw River surveyed between September 2021 and March 2022 provide new insights into the sandfish life cycle, spawning cues and threats. Sandfish populations (and those of co-occurring fish species) were surveyed at 10 sites on the Doring River main stem and 15 sites on five Doring River tributaries for the first time in nearly a decade, which will greatly increase the accuracy of the next Red List Assessment of the species, and other freshwater fish conservation planning initiatives. Preliminary survey results indicate that half the sites on Doring River had no indigenous species and almost no subadults were recorded across all sampling sites.



Challenges

There has been excessive growth of aquatic vegetation in some of the sanctuary dams, which can negatively influence water quality and oxygen levels. We have a plan to reduce aquatic vegetation biomass in selected dams through manual vegetation removal and the introduction of sterile grass carp. We are also seeing slower sandfish growth in some sanctuaries than what was seen in previous years. We suspect that this may be linked to temperature or carrying capacity and plan to use our dam survey data to guide optimal fish stocking densities.



Project outputs

It has been a productive year for the project, with new a new scientific paper published in addition to several articles, radio interviews, presentations and a new episode in the Saving Sandfish web series. Links to key outputs are included below:

Scientific articles

- [Cerrilla C, Afrika J, Impson D, Jordaan MS, Kotze N, Paxton BR, Reed C, Schumann, van der Walt JA and Shelton JM. 2022. Rapid population decline in one of the last recruiting populations of the endangered Clanwilliam sandfish \(Labeo seeberi\): The roles of climate change and non-native fish. Aquatic Conservation: Marine and Freshwater Ecosystems DOI: 10.1002/aqc.3785.](#)

Digital stories

- [South Africa's sandfish are on the brink of extinction: how farmers are helping rescue them](#) (The Conversation, 2022)
- [Safe havens: Conserving endangered Clanwilliam sandfish, pool by pool](#) (UCT News, 2022)
- [Scientists, farmers team up to save one of SA's most threatened fish](#) (News 24, 2022)
- [Red die onderbekvis](#) (Landbou Weekblad, 2022)
- [Saving the sandfish – a case study in biodiversity](#) (Investec, 2022)
- [Saving South Africa's most threatened fish](#) (Getaway, 2022)
- [The unprecedented effort to save one of Africa's most threatened fish](#) (National Geographic, 2022)

Radio interviews

- [Radio Sonder Grense \(Riaan van der Walt, 12 April 2022\)](#)
- [Cape Talk Radio \(Cecilia Cerrilla, 8 March 2022\)](#)

Web series

- Saving Sandfish webisode 4 – [The Quest for Spawning](#)

Virtual reality

A short virtual reality experience has been created to raise sandfish conservation awareness and support among land owners and communities in the project area. The experience has been piloted with ten individuals in the Biedouw Valley and will be rolled out to other land owners and communities across the Cederberg over the next year.



Partnerships and support

We are thrilled that the Saving Sandfish continues to grow in partners, supporters, funders and collaborators. Your generous support is what makes this work possible, and we plan to keep growing the Saving Sandfish community over the upcoming year.

Online content library

We have set up an online content library comprising images, video and text to provide you, the partners, with project materials for creating content for social media, web pages or any other avenues for celebrating the project and your affiliation with this work. Also included are the saving sandfish web series video files. Content library available [here](#). Please credit image use as per file name.

Next steps

It's looking to be an exciting upcoming year! We are working to publish a scientific paper on the sandfish conservation work and success thus far. We also have plans to:

1. Revisit historical sites on the Olifants River mainstem and gauge the status of freshwater fishes down the length of the river relative to survey data from decades ago,
2. Address the aquatic vegetation issue in sanctuary dams using grass carp and manual clearing,
3. Install five new information boards about the project at strategic points in the northern Cederberg,
4. Ramp up our sandfish rescue, tag and release efforts, and stock the newly-created sanctuary dams

A vision to secure the long-term survival of Clanwilliam sandfish in the Biedouw Valley

We are developing a plan to secure funding and initiate the next phase of the project where we are looking to work collaboratively with partners and supporters to rehabilitate a 6km reach of the upper Biedouw through removing invasive plants and fish to secure the long-term survival of sandfish in the catchment.



Project support

Financial support for the Saving Sandfish project over the last year has come from the by IUCN Save Our Species, co-funded by the European Union, the National Geographic Society, the Rufford Foundation, Mount Ceder, the Federation of South African Flyfishers (FOSAF), the Mohammed Bin Zayed Species Conservation Fund, Caleo Capital, Investec and Bushmans Kloof. The Ford Wildlife Foundation provided a field vehicle and Biomark and Biotactic have supported the project through equipment donations. Enjo, Mertenhof, Mount Ceder, Driehoek and Alpha Excelsior assisted through providing accommodation. Gone Outdoor and World Fish Migration Foundation helped share the sandfish story with their audiences. Project partners CapeNature, DAERL, EWT, Fishwater Films and Fynbos Fish Trust assisted with on-the-ground conservation action. The Saving Sandfish project is run through the FRC's Cape Critical Rivers initiative.