

Biodiversity Challenge Funds Projects Darwin Initiative, Illegal Wildlife Trade Challenge Fund, and Darwin Plus Half Year Report

Note: If there is any confidential information within the report that you do not wish to be shared on our website, please ensure you clearly highlight this.

Submission Deadline: 31st October 2023

Project reference	IWT114
Project title	Harnessing technology to end the illegal trade in succulent plants
Country(ies)/territory(ies)	South Africa and Namibia
Lead partner	Royal Botanic Gardens, Kew
Partner(s)	TRAFFIC
Project leader	David Whitehead, Project Leader, Royal Botanic Gardens, Kew.
Report date and number (e.g. HYR1)	31.10.2023 – HYR2
Project website/blog/social media	RGB Kew: Website TRAFFIC: Website ; Facebook ; Instagram ; LinkedIn

Outline progress over the last 6 months (April – Sept) against the agreed project implementation timetable (if your project has started less than 6 months ago, please report on the period since start up to end September).

Although we are not looking for specific reporting against your indicators, please use this opportunity to consider the appropriateness of your M&E systems (are your indicators still relevant, can you report against any Standard Indicators, do your assumptions still hold true?). The guidance can be found on the resources page of the relevant fund website.

Reporting Period: 1st April 2023 – 30th September 2023 (6 months):

Output 1 - Greater understanding of trade dynamics informs law enforcement strategy and action.

- **Indicators 1.1 and 1.2:** While the web crawling algorithm was improved in Year 1, we have recently encountered some unexpected technical issues relating to the installation process and with the export of captured data, where some data loss was suspected. A Computer Science intern from the University of Southampton is currently working to resolve these issues while also making further improvements the functionality of the crawler itself, which is progressing well. Following a ground truthing exercise to verify the performance of the improved version of the software, we expect to deploy the crawler for live data capture soon within the next project quarter, when our Logframe objectives of analysing data from a range of online settings will be achieved or surpassed. Among the improvements being made, the operational interface has been updated to improve user-friendliness, with new installation guides and training materials developed to allow for simpler installation requiring less support from IT specialists. This will help with both the operation of the crawler by project staff and better facilitate the training of new users of the software under Indicator 2.2 (see Annex 1 for further details).

- **Indicator 1.3:** TRAFFIC made major progress this year so far in obtaining data from court cases and seizures in South Africa. TRAFFIC received data on 185 court cases involving illegally obtained succulent plants that took place between 2019 and 2023 from the Northern Cape Province (NC). As of end Q2, TRAFFIC has processed data on 112 court cases and uploaded these into TRAFFIC's Wildlife in Trade Information System (WiTIS). TRAFFIC also collated information on 267 seizures involving illegally obtained succulent plants that took place between 2019 and 2022 – 123 occurred in the NC and 144 occurred in the Western Cape Province (WC). A map of the seizure data for both provinces was developed (see Annex 2 Figure 7 – do not publish).
- TRAFFIC completed the analysis involving CITES Trade Data for South Africa and Namibia. Succulent species or genera distributed in South Africa and Namibia which are listed in the CITES Appendices or EU Annex D were identified from a recent guide to CITES-listed succulents. CITES trade data were downloaded in July 2023 and data submitted during the time frame of 1995-2021 were analysed.
- In TRAFFIC's 1998 succulent trade study, TRAFFIC obtained succulent price lists between 1982 and 1994 from 133 traders using their physical catalogues. TRAFFIC has searched for these traders online to obtain their most recent price lists as physical catalogues are hardly used any more. Of the 133 traders, succulent plant price lists were obtained from 22 traders. The other traders are either no longer active (13) or we could not locate their websites or any information on them (46) or require us to contact them for their price lists through mail order (49) or no longer trade in succulent plants (3). To supplement this, TRAFFIC obtained price lists from another 20 online stores as well as from four Whatsapp group sales. All this information will be collated and analysed for a comparison with the 1998 succulent trade study findings.
- TRAFFIC continues to monitor online advertisements of succulent plants, with input from another TRAFFIC project called Reducing Trade Threats to Africa's wild species and ecosystems (ReTTA) forming part of the matched funding arrangements for the project. On a monthly basis, TRAFFIC takes screenshots of advertisements of specific succulent species and converts the foreign currency to South African Rands (see Annex 2 Figure 8). These screenshots are uploaded into a secure online folder for various law enforcement officials to use for their valuation statements for court cases.
- **Indicator 1.4:** TRAFFIC signed a research agreement from South African National Parks (SANParks) for a research permit for interviews with SANParks employees, such as those at Namaqua National Park and |Ai-|Ais/Richtersveld Transfrontier Park in the NC. TRAFFIC also received provisional ethical clearance for this human research from the University of the Witwatersrand (Wits) in South Africa. Once the research agreement is signed by SANParks, TRAFFIC will receive the research permit and can submit this to Wits for the final ethical clearance certificate, after which these interviews can take place.
- **Indicator 1.5:** TRAFFIC's Consultant, Namibia's National Botanical Research Institute (NBRI), conducted field trips to Namib Naukluft Park, the Tsau //Khaeb (Sperrgebiet) National Park and the Ais Ais / Richtersveld Transfrontier Park in southern Namibia to record colonies of succulent plant species that are deemed at risk of being illegally harvested for the illegal trade (See Annex 3 Figures 9 and 10). The species recorded ranged from dwarf succulents (e.g., *Lithops*, *Namibia*, *Conophytum*), succulent shrubs (e.g., *Euphorbia*, *Pelargonium* and *Sarcocaulon*) and succulent trees or pachycauls (e.g., *Aloidendron*, *Commiphora* and *Tylecodon*). NBRI is finalising their field trip report, which will be incorporated into the project team's final research report shared with Namibia's Protected Plants Task Team upon completion.

Output 2 - Technical skills of law enforcement officers in identifying and intercepting illegally traded succulent plants are improved, supported by innovative technology.

- **Indicator 2.1:** TRAFFIC, through matched funding with its INL Mentorship project, brought on two consultants – a plant mentor and law enforcement mentor – to develop a one-day training curriculum for Environmental Management Inspector (EMI) mentees. TRAFFIC along with the mentors ran four trainings for EMI mentees from various agencies such as the Department of Agriculture, Environmental Affairs, Rural Development and Land Reform (DAERL) in the Northern Cape Province, CapeNature in the Western Cape Province, and the Special Investigation Unit and Compliance and Enforcement Unit from the Province of the Eastern Cape’s Department of Economic Development, Environmental Affairs and Tourism (DEDEA) in the Eastern Cape Province in South Africa (See Annex 4 Figures 11 to 14). A total of 13 EMI mentees in the three provinces received training on the following topics: i. Importance of succulent plant diversity in South Africa, ii. Basic succulent plant identification, iii. Introduction to national and provincial legislation that protect succulent plants, iv. Criminal penalties for convictions of cases involving succulent plants, v. Maintaining the chain of custody in the event of a succulent plant seizure, vi. The process of rehabilitating confiscated plants, and vii. Roles and responsibilities of EMIs in combating the illegal succulent plant trade. 16 other officials also attended these trainings. 50 copies of the South African CITES Appendix 3 guide were printed and distributed to various LE officials in these 3 provinces.
- **Indicator 2.2:** Recipients of the Floraguard training have been identified and these include data analysts from South Africa’s Department of Forestry, Fisheries and the Environment’s (DFFE) Environmental Enforcement Fusion Centre and Namibia’s Ministry of Environment, Forestry and Tourism’s Intelligence and Investigation Unit (MEFT–IIU). Kew and the University of Southampton have continued to refine a package of software downloads and training materials for AI led online search techniques, to be used in this training, with a focus on simplifying the installation and operation procedures to make the software more appropriate for non-expert users (see Indicators 1.1 and 1.2 above, and Annex 1 Figures 1 to 6).

Output 3 - Internet companies are aware of their responsibility to police and deter illegal trade in succulent flora and adopt and implement effective monitoring frameworks.

- **Indicators 3.1 to 3.3:** TRAFFIC brought on a legal consultant that (1) identified strengths, weaknesses, and gaps in current trading policies with regards to plants and seeds from over 50 ecommerce platforms/companies/online marketplaces; (2) drafted a “best version” external-facing policy that these platforms could customise or simply add to their sites to make traders aware of what plants are prohibited, what plants are allowed to be traded, how compliance with this will be monitored and enforced, etc., and (3) drafted an internal-facing policy for an ecommerce company to share with their staff that monitor advertisements for prohibited items. This policy also contains a list of priority succulent plant taxa found in South Africa that are being traded online as well as any legal protections afforded to these through provincial ordinances, national acts and international treaties. A workflow is being developed to guide the actions of these platforms in enforcing these policies. Once completed, these will be shared with South African stakeholders working on the National Response Strategy for review and feedback.
- TRAFFIC attended the [Coalition to End Wildlife Trafficking Online](#) Convener’s Meeting in September 2023 in Cambridge, UK (See Annex 5 Figures 15 and 16). The Coalition brings together companies from across the world in partnership with wildlife experts at WWF, TRAFFIC, and IFAW for an industry-wide approach. The purpose of this meeting was to review the progress of the Coalition since its inception in 2017, review existing relationships with member companies and discuss a strategy for and the sustainability of the Coalition going forward. TRAFFIC presented on the proposed engagement on monitoring plants and seeds of priority succulents with a major eCommerce platform. The Coalition attendees agreed that plants should be included in monitoring going forward and that the engagement with a major platform involving the priority list of succulent plants might pave the way for how ecommerce companies do this.

Output 4 - Development and testing of innovative tools and technology to improve and facilitate identification and intervention of illegally traded succulent flora.

- **Indicator 4.1:** Using plant material of South African origin, Kew has developed a methodology to take samples from succulent plants and prepare these for laboratory analysis, to profile their stable isotope and trace element content. 149 samples from 61 plants (representing 8 different species of the same genus) have been taken, weighed and dried in preparation for sending to an external laboratory partner for analysis. As these samples represent 3 different plant loci, we are on track to meet the objectives of Logframe Indicator 4.1 in terms of the number of samples processed (target 50) and number of plant loci evaluated (target 3), and expect the results of these initial tests to inform and refine our approach to the methodology and sampling strategies required under Indicators 4.2 and 4.3.
- **Indicators 4.2/4.3:** As detailed in our September 2023 change request, we have postponed plans for fieldwork to collect georeferenced samples from the field to 2024. This will enable more time to plan the optimum combination of species and collection localities, using the results of Indicator 4.1 to inform our approach, with more detailed planning of this fieldwork underway in collaboration with colleagues in South Africa.
- **Indicator 4.4:** Following some delays to initiating this activity (please see Sept 2023 change request), a methodology has been developed, with materials and equipment acquired and plant specimens selected and donated from Kew's Living Collection for use in this experiment. Experimental treatments to harmlessly mark plants for traceability purposes will be applied in early November 2023, with the experiment due to be conducted over the next 12 months, although initial results are expected within 1-2 months from when the treatment is applied. **Please see Annex 6 for further details relating to each of these Output 4 Indicators.**

Project Outreach and Networking:

TRAFFIC and Kew continue to actively engage with stakeholders working on South Africa's National Response Strategy to Address the Illegal Trade in South African Succulent flora. There have been several opportunities to provide updates on the project and receive feedback from key stakeholders, including **(please also see Annex 7):**

- Kew contributed via interview and a validation workshop to a study conducted by the Institute for Security Studies in South Africa, evaluating responses to the South African National Response Strategy and Action Plan to the succulent poaching crisis. Once the study is published, the project team will consider the final recommendations if relevant and incorporate them into our future work if possible.
- Attendance and presentations on project work at two online meetings of stakeholders contributing to the South African National Response Strategy and Action Plan to address succulent poaching (10/08/23 and 02/10/23).
- TRAFFIC has worked with WC's CapeNature on the EMI mentee training in Cedarberg. CapeNature also approached TRAFFIC and requested assistance with a training for law enforcement officials including traffic officials in the WC on the illegal succulent trade issue. TRAFFIC could not support this training but has secured support from CapeNature for future proposals to support LE trainings in the future.
- TRAFFIC was invited to present on the project and its preliminary results at United For Wildlife's Southern African Chapter Strategy Session in Johannesburg, South Africa, in August 2023 **(see Annex 7 Figure 38).** [United for Wildlife \(UfW\)](#) was created by Prince William and The Royal Foundation in 2014 to protect endangered species from the illegal wildlife trade. Their mission is to foster cross-sector collaboration to make it impossible for traffickers to transport, finance, or profit from illegal wildlife products. UfW acknowledges that the illegal harvesting and trade in Southern Africa's succulent plants is a concerning issue and are supportive of raising awareness among their members to assist in combating this.

- The project team gave input on a proposal for the creation of a Succulent Plant Illegal Trade Task Force (SCITTF) under IUCN's Species Survival Commission (SSC) to address the illegal succulent plant trade, which requires urgent attention due to the devastating impact this trade is having on many succulent plant species and their ecosystems. TRAFFIC and Kew are shortlisted to be members of the SCITTF, with our project work aligning well with many of the aims and objectives of this new expert group.
- Members of the project team attended the Arid Zone Ecology Forum (AZEF) in October 2023, to deliver a keynote speech based on project work and develop relationships with project partners and key stakeholders in support of in-country work planned for 2024, which we will report on more fully in the next Annual Report.

2. Give details of any notable problems or unexpected developments/lessons learnt that the project has encountered over the last 6 months. Explain what impact these could have on the project and whether the changes will affect the budget and timetable of project activities.

While our Logframe assumptions still hold true, some valuable lessons from the last 6 months include:

Indicator 1.1: The development of novel software under this indicator has encountered several delays, with the need for some technical corrections and refinements impacting timelines to final deployment. This has, however, provided an opportunity to identify, reflect on and correct weaknesses in the initial design, and view things through a slightly different lens, placing more focus on ease of installation and use, rather than the functionality of the algorithm itself, creating a more robust product that will be more suitable for wider deployment in the longer term.

Indicator 1.4: There was a delay to the completion of the interviews with stakeholders in South Africa. TRAFFIC was unaware that it is becoming compulsory to have ethical clearance for any research involving humans, especially by institutions such as South African National parks (SANParks). To receive the SANParks research permit for interviews with protected area managers, TRAFFIC was required to submit an ethical clearance certificate. TRAFFIC completed their application for this in July 2023 and received provisional ethical clearance in September 2023 from the Ethics Committee at the University of the Witwatersrand (Wits) in South Africa. TRAFFIC submitted this to SANParks and received both a research agreement and research permit from them for this research. In October 2023, TRAFFIC received the final ethical clearance certificate and can therefore commence the interviews. Interviews could not begin before receipt of the certificate and permit. TRAFFIC intends to complete all interviews in the next quarter as TRAFFIC already has developed a list with all contact details and tentative acceptance of interview requests by many stakeholders. The delay in collecting this data will lead to a delay in its analysis and report write-up however this will be completed within the project's timeline.

Indicators 3.1 to 3.3: During TRAFFIC's attendance at the Coalition to End Wildlife Trafficking Online Convener's Meeting in September 2023 in Cambridge, UK, it was understood that the Coalition may plan to undertake some restructuring processes. During this time, while the promotion of plants and engagement with companies on enforcing policies relating to trading in plants is a priority, there may need to be a delay to direct engagement with major eCommerce platforms during this period of flux. TRAFFIC and Kew have developed a list of questions to submit to a potential eCommerce partner to help progress this engagement, and will continue to seek opportunities for engagement and collaboration with industry, with an aim of submitting the draft policies that have been prepared for review by industry experts, when appropriate.

Indicators 4.1 to 4.4: Some of the challenges around this work have included the long lead times required to arrange the international shipment of plant material, and the complex logistics involved in planning fieldwork requiring access to localities spread across a wide geographic range. In each case, several months have been added to our timelines for experimental work within Output 4, although by using the additional time to apply new learning to refine and adapt our planning, we believe the final outcome of these workstreams will ultimately be enhanced, while taking care to ensure that our deliverables can still be achieved within the overall lifetime of the project.

3. Have any of these issues been discussed with NIRAS and if so, have changes been made to the original agreement?

Discussed with NIRAS: **Yes/No**

Formal Change Request submitted: **Yes/No**

A change request for the project is currently under review. This reflects the challenges we have encountered over the last 6 months, and we will continue to monitor and evaluate our progress, particularly in areas where delays have been encountered, to ensure we tailor our approach to deliver each of our project objectives within the available timelines.

Received confirmation of change acceptance **Yes/No**

Change request reference if known: **Reference not known.**

4a. Please confirm your actual spend in this financial year to date (i.e., from 1 April 2023 – 30 September 2023)

Actual spend: £ [REDACTED]

4b. Do you currently expect to have any significant (e.g., more than £5,000) underspend in your budget for this financial year (ending 31 March 2024)?

Yes Estimated underspend: £ [REDACTED]

*The movement of these funds into FY3 has been requested in our current change request.

4c. If yes, then you need to consider your project budget needs carefully. Please remember that any funds agreed for this financial year are only available to the project in this financial year.

If you anticipate a significant underspend because of justifiable changes within the project, please submit a re-budget Change Request as soon as possible. There is no guarantee that Defra will agree a re-budget so please ensure you have enough time to make appropriate changes if necessary. Please DO NOT send these in the same email as your report.

NB: if you expect an underspend, do not claim anything more than you expect to spend this financial year.

5. Are there any other issues you wish to raise relating to the project or to BCF management, monitoring, or financial procedures?

None.

If you are a new project and you received feedback comments that requested a response, or if your Annual Report Review asked you to provide a response with your next half year report, please attach your response to this document.

All new projects (excluding Darwin Plus Fellowships and IWT Challenge Fund Evidence projects) should submit their Risk Register with this report if they have not already done so.

Please note: Any planned modifications to your project schedule/workplan can be discussed in this report but **should also be raised with NIRAS through a Change Request. **Please DO NOT send these in the same email.****

Please send your **completed report by email** to BCF-Reports@niras.com. The report should be between 2-3 pages maximum. **Please state your project reference number, followed by the specific fund in the header of your email message e.g. Subject: 29-001 Darwin Initiative Half Year Report**

Please also see separate Annex document containing images and examples to help expand on the notes and points raised above.