

Applicant: **Cowell, Carly**
Organisation: **Royal Botanic Gardens Kew**
Funding Sought: **£513,567.00**

IWTR8S2\1043

Harnessing technology to end the illegal trade in succulent plants.

The illegal trade in Southern African succulent plants is resulting in extinctions. Addressing the supply and sale of illegally trafficked plants faces regulatory and enforcement challenges. Multidisciplinary research, from use of Artificial Intelligence tools to personal interviews, will identify points of intervention and inform strategies to improve regulation and law enforcement actions. Development of chemical fingerprinting and marking techniques will enable traceability and transparency in trade, while aiding the reintroduction of confiscated plants to their original locality in the wild.

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CONTACT DETAILS

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GMS ORGANISATION

| Type | Organisation |
|----------------|--|
| Name | Royal Botanic Gardens Kew |
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Section 2 - Objectives, Species & Summary

Q3. Title:

Harnessing technology to end the illegal trade in succulent plants.

What was your Stage 1 reference number? e.g. IWTR8S1\1001

IWTR8S1\1121

Q4. Which of the four key IWT Challenge Fund objectives will your project address?

Please tick all that apply. Note that projects supporting more than one will not achieve a higher score.

- Reducing demand for IWT products
- Ensuring effective legal frameworks and deterrents
- Strengthening law enforcement

Q5. Species project is focusing on

Where there are more than four species that will benefit from the project's work, please add more boxes using the selection option below.

Aizoaceae family (stone plants or vygies – Lithops, Conophytum, and Mesembryanthemum spp).

Crassulaceae family (the stonecrop family – Crassula, and Tylecodon spp).

No Response

No Response

Do you require more fields?

No

Q6. Summary

Please provide a brief summary of your project, its aims, and the key activities you plan on undertaking. Please note that if you are successful, this wording may be used by Defra in communications e.g. as a short description of the project on the website.

Please write this summary for a non-technical audience.

The illegal trade in Southern African succulent plants is resulting in extinctions. Addressing the supply and sale of illegally trafficked plants faces regulatory and enforcement challenges. Multidisciplinary research, from use of Artificial Intelligence tools to personal interviews, will identify points of intervention and inform strategies to improve regulation and law enforcement actions. Development of chemical fingerprinting and marking techniques will enable traceability and transparency in trade, while aiding the reintroduction of confiscated plants to their original locality in the wild.

Section 3 - Title, Dates & Budget Summary

Q7. Country(ies)

Which eligible host country(ies) will your project be working in? Where there are more than four countries that your project will be working in, please add more boxes using the selection option below.

Country 1 South Africa

Country 2 Namibia

Country 3 No Response

Country 4 No Response

Do you require more fields?

No

Q8. Project dates

Start date:

01 July 2022

End date:

30 June 2025

Duration (e.g. 2 years, 3 months):

3 years

Q9. Budget summary

| Year: | 2022/23 | 2023/24 | 2024/25 | 2025/26 | Total request |
|----------------|-------------|-------------|------------|---------|------------------------|
| Amount: | £225,248.00 | £215,611.00 | £72,708.00 | £0.00 | £ 513,567.00 |

Q10. Proportion of IWT Challenge Fund budget expected to be expended in eligible countries: % ■

Q11a. Do you have matched funding arrangements?

Yes

What matched funding arrangements are proposed?

RBG Kew (■■■■■): This is directly from Kew and includes computer equipment for web crawling, journal publication fees and facilities to host workshops. Access to botanical and laboratory experts at Kew and via Kew's wider network, will provide additional in-kind funding. Additional support is provided by the Millennium Seed Bank Partnership: South African programme which will be focusing on the Succulent Karoo Biome in the next phase of the programme (2022-2024).

TRAFFIC (■■■■■):

£■■■■■ through the 'Reducing Trade Threats to Africa's wild species and ecosystems' project funded by Arcadia.

£■■■■■ through the 'Development of a Comprehensive Mentoring Programme for Junior Wildlife Investigators in South Africa' project funded by United States Department of State - Bureau of International Narcotics and Law Enforcement Affairs.

Source Certain International (■■■■■):

In-kind funding will be provided through the interpretation and reporting of data, over and above the initial analysis of samples.

Q11b. Total confirmed & unconfirmed matched funding (£) ■■■■■

Q11c. If you have a significant amount of unconfirmed matched funding, please clarify how you fund the project if you don't manage to secure this?

Source Certain International are exploring the potential for match funding from the Australian Government. While the execution of Output 4 does not depend on this, if successful, this funding may enable us to expand the scope of the laboratory analysis, for example by encompassing a wider range of species or plant groups.

Section 4 - Problem statement & Gap in existing approaches

Q12. Project stage

With reference to the application guidance, please select the relevant project stage.

Main

Q13. Problem the project is trying to address

Please describe the problem your project is trying to address in terms of illegal wildlife trade and its relationship with poverty. Please describe the level of threat to the species concerned. Please also explain which communities are affected by this issue, and how this aspect of the illegal trade in wildlife relates to poverty or efforts of people and/or states to reduce poverty.

Please cite the evidence you are using to support your assessment of the problem (references can be listed in your additional attached PDF document).

Succulent plants, or 'succulents', are drought resistant plants which are slow growing, long lived, and occur in arid areas. Africa has the highest number of native succulent species, many of which are in high demand for ornamental use by collectors in America, Europe, and Asia. Given that many of these species are endemic to South Africa and Namibia and occur in very small areas, illegal harvesting is a severe threat to the survival of many species in the wild.

In South Africa, poaching is now rife in both private reserves and state protected areas in the Northern, Eastern and Western Cape Provinces. Since 2019, >600,000 illegally harvested succulents, representing 450 different species have been seized by authorities as the plants transit Southern Africa to overseas markets [1-4]. This illegal trade, much of which occurs online, has severely impacted biodiversity in arid zones such as the Succulent Karoo, which supports more than 6,000 succulent species, of which 40% are endemic [5]. Single poaching episodes are thought to have resulted in whole species extinctions [4]. Their loss degrades ecosystems, deprives Africa of unique natural resources, and criminalises those drawn into illegal harvesting for financial gain. Exacerbated by the Covid19 pandemic, poverty drives this activity and leads to re-offending to pay-off fines. Other negative impacts include the supply of drugs by trafficking syndicates, as payment for illegally harvested plants [4].

Within South Africa, confiscated plants require potting and processing for criminal cases at a rate of >3,000 plants a week, placing significant strain on conservation agencies. Reintroduction of seized plants to the wild is complicated through not knowing their precise place of origin [4].

In Namibia, less is known about the illegal trade in succulents, although intelligence from law enforcement, including in the Tsau//Khaeb National Park, which recently opened to tourism, indicates that succulents are also being targeted by illegal collectors.

The surge in succulent poaching highlights the role the internet may play in facilitating the sale of trafficked plants. Consumers range from naïve online purchasers who lack awareness of the consequences of their purchasing behaviours, to specialist collectors who knowingly seek rare, novel or "authentic" wild specimens [6-8]. The lack of regulation and enforcement in online markets enables vendors to trade with scant regard to the conservation status of their merchandise and relative impunity, using postal and courier services with no inherent controls to circumvent border checks [9-12].

The last authoritative report on the trade in southern African succulent species is now 24 years old and needs urgent updating [13]. Better understanding of the dynamics of plant crime, enhanced tools for detection and enforcement and changes to online trading policies are urgently required.

South Africa has drafted a National Response Plan to address the challenges of illegal harvesting [1]. This project aligns with these objectives, by increasing understanding of facilitators of illegal trade to inform law enforcement action, providing new forensic tools to verify plant provenance, and engaging with the online sector to improve compliance in online markets for threatened plants.

Q14. Gap in existing approaches

What gap does your project fill in existing approaches? Evidence projects should describe how the improved evidence base will be used to design an intervention and the gap the intervention will fill. Extra projects should also provide evidence of the intervention's success at a smaller scale.

This project aims to complement South Africa's national response to the succulent poaching crisis, focusing on improving the knowledge base on current succulent trade dynamics. It will also inform Namibia's strategic response.

The 1998 TRAFFIC trade report will be updated to include e-commerce markets, presenting new data on the identity and volumes of species in trade, quantities and origins of suspicious online posts, opportunities to enhance online trading policies and legislation, insights into judicial systems, motivations of poachers and the role of plant nurseries in facilitating illegal trade.

FloraGuard, an artificial intelligence (AI) methodology developed for plant IWT work, is a web crawler and will enable the search and analysis of relevant websites [14-17]. Vastly more efficient than manual searches, this technique enables systematic searches of trade activity and horizon scans of emerging horticultural trends.

Current efforts to tackle online IWT focus on fauna [18]. Challenges regulating plant trade online include species identification and differentiating wild-sourced from cultivated specimens. This study will also create a laboratory-based wildlife forensics tool to establish plant provenance with certainty.

This multidisciplinary approach will provide online companies and enforcement agencies with the awareness, knowledge and tools required to effectively combat the illegal trade in plants.

Section 5 - Objectives & Commitments

Q15. Which national and international objectives and commitments does this project contribute towards?

Consider national plans such as NBSAPs and commitments such as London Conference Declarations and the Kasane and Hanoi Statements. Please provide the number(s) of the relevant commitments and some brief information on how your project will contribute to them. There is no need to include the text from the relevant commitment.

The project aligns with specific objectives of the South African National Response Strategy to address illegal trade in South African succulents, now submitted for ministerial approval [1]. Within this, Kew and TRAFFIC are proposing to lead or support the following initiatives: 1.1.6 & 2.3.7. Exploring technological solutions to monitor/mark and track populations in field/ex-situ; 3.3.1 Develop training of enforcement officials; 3.5 Apply lessons from other IWT to illegal trade in succulents; 3.6.1 Use of AI tools for online trade monitoring; 3.6.2 Develop understanding of local trade dynamics and social-economic drivers of illegal harvesting, including livelihood options; 3.6.3 Develop understanding of international supply chains; 3.6.4 & 3.6.5 Engagement with online platforms and disseminating information on responsible plant purchasing.

Project outcomes and impacts support implementation of CITES and contribute to decisions 18.81-18.85 relating to Wildlife Crime Linked to the Internet [19]. They also compliment recommendation 60 of the UK's UNODC Wildlife and Forest Crime Analytic Toolkit Report, re. identifying illegal products and addressing "plant blindness" in the online sector [20].

By deterring, detecting and disrupting illegal trade in threatened species, the project aligns with the 2018 London Conference Declarations: Numbers IX, XII, XIII, XIV, XV, XVIII, XX, Kasane Statement 2015: Section A (No. 1-3); Section C (No. 6); Section D (No. 10-13) and the Hanoi declaration 2016: Eradicating markets for IWT products (Section A), Strengthening Enforcement (Section C) and Sustainable Livelihoods and Economic Development (Section D). This project contributes to

Section 6 - Method, Change Expected, Gender & Exit Strategy

Q16. Methodology

Describe the methods and approach you will use to achieve your intended Outcome and contribute towards your Impact. Provide information on:

- How have you reflected on and incorporated evidence and lessons learnt from past and present activities and projects in the design of this project?
- The need for this work and a justification of your proposed approach.
- How you will undertake the work (materials and methods).
- How you will manage the work (roles and responsibilities, project management tools, risks etc.).

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

Kew and TRAFFIC will identify prominent taxa and quantify trade using data captured from online marketplaces. Artificial Intelligence (AI) tools will be enhanced through refinements to the algorithms, and the creation of a simulated IWT marketplace to facilitate training and deployment [23].

Using the 1998 Southern Africa succulent trade report as a comprehensive baseline, TRAFFIC will analyse trade information (CITES data, nursery catalogues, seizures, court cases, etc.) and interview stakeholders to determine the sources, routes, pricing, and destinations, which will inform a comprehensive understanding of the trade in Southern African succulents. Three field trips will be undertaken to survey protected areas in Namibia to identify hotspot poaching locations and targeted species. These ecological surveys will be conducted by Namibia's National Botanical Research Institute as a consultancy.

These activities will provide both quantitative and qualitative understanding of the drivers behind the trade in succulents with recommendations to combat illegal trade, including changes to legislation.

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

Findings from the trade study will inform the design and production of training materials, delivered as a specialised curriculum for 14 Junior Environmental Management Inspectors (EMIs). Ongoing mentoring support will be available post-workshop from senior investigators (provided under matched funding through an INL project).

Kew and the University of Southampton will deliver training to Senior enforcement personnel in South Africa on AI online search technology. This builds on previous work developing this approach to the analysis of online plant trade [14-17, 23].

These enhancements in technical capabilities will strengthen the ability of enforcement teams to detect, intercept and address indicators of illegal trade, and to conduct effective monitoring of online trade activity.

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.

TRAFFIC and Kew will identify relevant online platforms, evaluate their policies relating to plant trade, and will engage with these companies directly and in collaboration with the 'Coalition to End Wildlife Trafficking Online' [18], to:

Encourage the adoption of trading policies and standards in the online sale of succulents.

Provide support to capacitate internet companies to detect, flag and remove suspect adverts.

Raise awareness and educate consumers on the conservation issues and promote greater responsibility in buying decisions.

This work will create impetus for industry change in improved regulation of online trade in plant species.

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

Collaborating with specialist laboratories, Kew will develop a provenance testing tool for *Conophytum* spp. based on Stable Isotope Ratio Analysis (SIRA) and trace element sampling techniques. The use of these “chemical fingerprints” to determine the geographic origin of organisms or system used to produce them, is proven in agriculture, fisheries and wildlife forensics [24-32], where evidential standards and best practice are established [36-38], but has not been applied to succulent plants. Isoscape maps for southern Africa have identified key isotopes of interest [32-33] and form a foundation for this work.

Each research stage will inform refinements to further analysis, to:

Identify combination of plant loci, isotopes and trace elements which work best to determine geographic point of origin in wild and cultivated *Conophytum* spp.

Determine the turnover rate of isotopes/elements within wild plants transferred to cultivated settings.

Determine whether these chemical fingerprints are common to *Conophytum* spp. at genus level.

Create geographical origin maps and statistical plots based on the stable isotope/elemental profiles for *Conophytum* species using samples of 50-100 wild specimens and comparisons with existing ground water isotope maps of the Karoo area.

Use the geographical origin maps and statistical plots created to i) verify marketplace specimens and ii) aid the re-introduction of confiscated specimens to the wild. This links with existing Karoo Biome initiatives that Kew is partnering on [39-40].

Test isotopically unique water (as used in seed dispersal studies [34-35]) as a traceable marker for cultivated plants, with signal strength measured over time.

Share results with enforcement agencies relevant stakeholders to discuss scaling and replication.

Georeferenced specimens will be collected in collaboration with Millennium Seed Bank project activities. The collection, use and shipment of specimens will comply with all permit, quarantine and forensic chain of custody requirements, aspects of fieldwork in which Kew and our laboratory partners have considerable experience and expertise.

Q17. Capability and Capacity

How will you support the strengthening of capability and capacity in the project countries at organisational or individual levels, please provide details of what form this will take and the post-project value to the country.

The new succulent plant report will guide the content of training materials for 14 junior EMI's and dedicated mentors, selected by DFFE nationally. Newly created training materials will remain available for use by future generations of EMI's, to ensure specialised skill sets needed to counter the illegal plant trade are maintained at organisation level.

Training in AI tools for in-country practitioners and enforcement staff will be supported through online teaching, videos and a manual. Development of these skills will enable online trade to be efficiently monitored, supporting moves to strengthen national and international legal frameworks around online trade. AI software will remain available post-project and will be supported by future upgrades. Trade data will be securely stored within TRAFFIC's WiTIS database, ready for additional information and re-analysis.

The project will provide materials for staff training in the newly established SANBI Botanical Restoration Unit. Kew can provide ongoing expertise and advice to this unit and other in-country practitioners through the MSBP [40]. This includes use of the provenance tracing tools established in this study to aid reintroductions and through the rehabilitation knowledge of experts at Kew shared with in-country partners via the SANBI Karoo Desert Seed Conservation Team.

The results of Output 4 will be presented to enforcement agencies (Border Force, CITES, Police) and other relevant

stakeholders. Feedback will inform strategies for scaling these forensic traceability tools for replication and systems change and their potential incorporation within standard operating procedures by law enforcement agencies in Southern Africa, the UK and beyond.

Engagement with online technology companies will provide stakeholders with the awareness, motivation and knowledge to implement changes to online trading policies for succulent plants. These companies have global reach, and we intend this project to initiate a step-change in industry attitudes regarding the trade in threatened plants of all types.

Q18. Gender equality

All applicants must consider whether and how their project will contribute to reducing inequality between persons of different gender. Explain how your understanding of gender equality within the context your project, and how is it reflected in your plans.

The project aims to increase the knowledge and confidence of community members, thereby promoting responsible stewardship of their natural assets. Although rural populations are majority female, traditional gender norms prevail, preventing equal participation. Gender equality in this project pertains to the voices of women being heard when gathering information and evidence of illegal trade in succulent flora and the opportunity for them to contribute to development plans for follow-on projects around sustainable livelihood interventions. This project will provide information to SANParks for the future prospect of income generation for women in the region particularly in and around Namaqua National Park in the form of nurseries and re-introduction plantings.

Efforts will be made to ensure women are included as active participants and beneficiaries in any trainings and that project partners are proactive in their selection processes. We will follow a 'do no harm' approach to ensure that negative impacts do not arise from our gender equality actions.

Both Kew and TRAFFIC have non-discrimination policies, including in relation to gender, and are committed to equal opportunities in the recruitment of project staff.

Q19. Change expected

Detail the expected changes to both illegal wildlife trade and poverty reduction this work will deliver. You should identify what will change and who will benefit, considering both people and species of focus a) in the short-term (i.e. during the life of the project) and b) in the long-term (after the project has ended).

When talking about how people will benefit, please remember to give details of who will benefit, differences in benefits by gender or other layers of diversity within stakeholders, and the number of beneficiaries expected. The number of communities is insufficient detail – number of households should be the largest unit used. Demand reduction projects should demonstrate their indirect links to poverty reduction.

Sustainable supply chains require a measure of community involvement to work (e.g. plant nurseries, local protection). In the short-term, the project will empower and capacitate communities and enforcement personnel to tackle the illegal trade in succulent flora, reducing illegal harvesting and helping to protect local communities from exploitation by syndicates. At the same time, it will support key community-led conservation jobs, most notably guides and rangers. This will aid in the prevention of criminal activities by community members which perpetuates the poverty cycle.

Longer-term, reduced poaching activity and increased protection for wild populations will create the conditions for community-based conservation to thrive. For instance, the development of provenance marking and tracing tools would complement the development of a formal economy in nursery grown succulents, enabling these plants to enter transparent, legally compliant marketplaces and be promoted as sustainable products to consumers. We recognise the community's important role in the operation of these facilities and would be happy to work closely with organisations within Southern Africa to provide our findings and assist with the setting up of legal succulent nurseries.

To protect species, the identification of species in demand and localities of at-risk populations, will enable the deployment of immediate preventative interventions, such as increased ranger monitoring, to provide greater local protection.

Greater insight into the trading practices of e-commerce companies and purchasing behaviours of buyers of succulent plants, will form the basis for engagement with both audiences. Raising awareness and providing technical expertise to the Coalition to End Wildlife Trafficking Online is expected to foster a change in online trade policies for plants, with recommendations for long-term legal reform to promote action by the private sector.

The actions of online technology companies will also raise consumer awareness around responsible buying decisions and lay the foundations for future investment in demand reduction communications. It is anticipated that the transition of these immediate goals into longer-term strategies will have a significant impact in reducing online trade of illegally harvested plants.

The use of chemical signatures to differentiate wild harvested from cultivated plants will support this change of approach by enabling transparency in supply chains and providing evidence for the prosecution of offenders. This short-term objective of providing evidential standards for enforcement agencies will also encourage industry to take responsibility for sustainable supply chains in the longer-term.

Geographic mapping of the isotope/trace element profiles of wild plants will enable the origin of confiscated materials to be determined. Knowledge of these localities will assist the re-introduction of mature plants or their seeds to their point of origin in the wild, which can be performed once the risk of poaching has diminished. Thus, poached plants can contribute once again to the genetic longevity of their species.

Publication and circulation of project findings to all stakeholder groups and the global conservation community will ensure that the results, learning and technological innovations may be scaled (at the country level) and replicated to other species of flora at risk from illegal harvesting.

Q20. Pathway to change

Please outline your project's expected pathway to change. This should be an overview of the overall project logic and outline how you expect your Outputs to contribute towards your overall Outcome and, longer term, your expected Impact.

Outputs include a greater understanding of trade to inform law enforcement strategies and actions, improved technical skills of law enforcement officers in identifying and intercepting illegally traded succulent plants and effective legal frameworks and deterrents to address illegal trade in succulent flora. This will be done through gathering data to understand the trade in South Africa and Namibia and by developing and piloting innovative tools and technology to improve and facilitate identification and intervention of illegally traded plants.

Understanding the illegal trade in succulent flora will also inform future conservation management.

The volume of illegal trade in succulent flora in South Africa and Namibia will be reduced through empowerment and capacitation of law enforcement agencies and local communities, and self-regulation by internet companies. Online technology companies will be shown their responsibility in acting as a deterrent for illegal trade in succulent flora and implementing appropriate strategies. Through this action, improved consumer awareness and responsible purchasing decisions will lead to a reduction in the demand for wild sourced plants.

This in turn will reduce the pressure on harvesting of wild populations of protected succulent plant species, supporting restoration efforts and the long-term recovery of these species in the wild.

Q21. Exit Strategy

How the project will reach a sustainable point and continue to deliver benefits post-funding? Will the activities require funding and support from other sources, or will they be mainstreamed in to "business as usual"? How will the required knowledge and skills remain available to sustain the benefits? How will your approach, if proven, be scaled?

This work will form a foundation on which to build on newly developed skills and develop a range of follow-on proposals.





The mentorship training, primarily conducted by retired enforcement officials, is intended to capacitate younger, junior EMIs at the beginning of their enforcement careers. The transfer of investigative knowledge and skills is set to motivate and capacitate these junior EMIs to adequately detect and investigate illegal succulent trade in future. The theory of 'train-the-trainers' will be used so that more conservation staff in South Africa can be trained on the AI online monitoring tools.

The awareness materials, support and advice developed for internet companies as part of this project will be disseminated to on-line companies via the 'End Wildlife Trafficking Online' Coalition, for incorporation into their marketing platforms. We believe this will initiate an industry review of online trade in plant commodities of all types, leading to future projects examining trade in timbers, cosmetics and medicines containing species of internationally protected plants.

The provenance tracing technologies will be made available to all enforcement agencies and laboratories in South Africa and the UK, along with other interested parties. Continued collection of georeferenced samples and testing of seized material will take place at RBG Kew through the Millennium Seed Bank project. Additional funding will be sought for continued work on South African succulents in trade, with monitoring of trade enhanced in the UK by listing Conophytums and other succulents of concern in UK CITES Annex D.

Our combined project outputs will help to create the conditions to support future livelihood interventions, helping to address poverty reduction in the long-term. For example, the development of a formal economy in succulents and accredited legal trade avenues would be supported by well-regulated online marketplaces, where consumers can readily differentiate sustainable products originating from South Africa.

If necessary, please provide supporting documentation e.g. maps, diagrams, references etc., as a PDF using the File Upload below:

-  [RBG Kew TRAFFIC IWT Stage 2 Supporting Documents and References](#)
-  22/03/2022
-  18:58:24
-  pdf 559.19 KB

Section 7 - Risk Management

Q22. Risk Management

Please outline the 6 key risks to achievement of your Project Outcome and how these risks will be managed and mitigated, referring to the [Risk Guidance](#). This should include at least one Fiduciary, one Safeguarding Risk, and one Delivery Chain Risk.

Projects should also draft their initial risk register, using the [Risk Assessment template](#), and be prepared to submit this when requested if you are recommended for funding. Do not attach this to your application.

| Risk Description | Impact | Prob. | Gross Risk | Mitigation | Residual Risk |
|--|--------|----------|------------|--|---------------|
| Fiduciary Funds not used for intended purposes or not accounted for (fraud, corruption, mishandling or misappropriated). | Severe | Unlikely | Moderate | Processes in place within Kew and TRAFFIC to prevent fraud and identify misappropriated funds. | Moderate |
| Safeguarding 'doing harm' incl. sexual exploitation abuse and harassment, staff safety and welfare, or unintended harm. | Minor | Unlikely | Minor | Safeguarding policies and processes in place in partner organisations. Project staff will receive safeguarding training and support. | Minor |

| | | | | | |
|---|-------|----------|----------|--|----------|
| Delivery Chain Specimens not shipped to labs and tested in time for results to be analysed. Training of EMI's not completed by DFFE Programme. | Minor | Unlikely | Minor | Material transfer agreements in place with South Africa. Australian lab has agreements with the AU government to accept specimens into the country. Agreements in place with DFFE using existing training programme. | Minor |
| Risk 4 Operational-Trade Project activity changes the behaviour of illegal traders (e.g., drives activity underground?). | Minor | Unlikely | Minor | Keep information of project activities to a small group of authorised people. Constant communication with enforcement in SA to monitor trade going underground. | Minor |
| Risk 5 Covid19: Field work and interviews not allowed due to pandemic lockdowns | Minor | Rare | Minor | Covid 19 restrictions are easing, and vaccination programmes are being rolled out. Alternative virtual meetings can be held. | Minor |
| Risk 6 Operational-Laboratory work Stable isotope and chemical element analysis yields no results for complex plant groups like Mesembryanthemum and Crassula. | Major | Rare | Moderate | Various lab procedures identified to be tested to avoid this risk of total failure. Isotopes found in ground water in the Karoo region already. | Moderate |


Section 8 - Implementation Timetable


Q23. Provide a project implementation timetable that shows the key milestones in project activities


Provide a project implementation timetable that shows the key milestones in project activities. Complete the Word template as appropriate to describe the intended workplan for your project.

[Implementation Timetable Template](#)

Please add/remove columns to reflect the length of your project. For each activity (add/remove rows as appropriate) indicate the number of months it will last, and fill/shade only the quarters in which an activity will be carried out. The workplan can span multiple pages if necessary.

 [RBG Kew TRAFFIC IWT-R8-St2 Implementation Time table](#)

 22/03/2022

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 pdf 208.25 KB

Section 9 - Monitoring and Evaluation

Q24. Monitoring and evaluation (M&E)

Describe how the progress of the project will be monitored and evaluated, making reference to who is responsible for the project's M&E.

IWT Challenge Fund projects are expected to be adaptive and you should detail how the monitoring and evaluation will feed into the delivery of the project including its management. M&E is expected to be built into the project and not an 'add' on. It is as important to measure for negative impacts as it is for positive impact. Additionally, please indicate an approximate budget and level of effort (person days) to be spent on M&E (see [Finance Guidance](#)).

RBG Kew's Project Review Committee (PRC) performs biannual M&E reporting exercises, which will apply to this project, enabling the progress of key project outputs to be regularly monitored. Similarly, TRAFFIC has internal M&E processes which will be followed, while monitoring and evaluation of work in Namibia will be reflected in the Terms of Reference of the consultancy agreement in place. Reports from all project partners will be provided to Kew for inclusion to their PRC process, setting regular milestones for the project.

To provide timely input to these reviews and more immediate feedback to the project team, the roles and responsibilities of staff in recording and reporting on progress will be established as part of a project monitoring and evaluation plan. While communication between partner organisations will be continual, project staff working in sub teams will be required to submit reports on progress towards key indicators to quarterly project management meetings between all partner organisations. These feedback loops with regular focal points, will enable the team to consider how developments under one Output can best inform progress in another, identify success and areas for expansion, and reassess indicators, activities and targets as required. This process of active adaptive management will ensure that synergies within and between our project Outputs are brought together at the right time, to maximum their combined effect.

Examples of key measures of progress include: Quantity and quality of data generated from the analysis of online and offline source of trade data is successfully added to TRAFFIC's existing trade database (indicator 1.1 and 1.3); number of project staff trained in the latest version of the AI web crawling technology and utilising these tools to generate new data from online sources (indicators 2.1, 2.2 contributing to indicators 1.1 and 1.6); progress towards a report on the trade in South African and Namibian Succulents and the creation of an awareness video (indicator 1.6); number of online technology companies successfully engaged, capacitated and committed to implementing new policies and other interventions relating to the trade in succulent plants (indicators 3.2 to 3.4, also drawing on indicator 1.1); performance indicators of engagement with consumers of succulent plants, including number of media engagements and impressions/views of online outreach materials (indicator 3.4); creation of isotope maps and progress towards journal publications on the chemical signatures of Conophytum spp. (indicators 4.1-4.3); reporting on results of isotope watering research (indicator 4.4); a planned strategy of engagement with relevant stakeholders (indicator 4.4 to 4.5).

Other longer-term measures of the project's impact include: number of investigations/arrests in relation to the illegal trade in succulent flora in South Africa and Namibia to which project outputs have contributed (Outcome 0.2); observed reductions in trade of priority species (e.g. measured against baselines set through analysis of online trade at the outset of the project) (Outcomes 0.3 and 0.4).

Team meetings will be held online, with staff expected to use 10% of their time to record and report on progress towards targets and actively participate in adaptive management planning.

Total project budget for M&E in GBP (this may include Staff, Travel and Subsistence costs)

██████████

Percentage of total project budget set aside for M&E (%)

█

Number of days planned for M&E

42

Section 10 - Logical Framework


Q25. Logical Framework


IWT Challenge Fund projects will be required to monitor and report against their progress towards their Outputs and Outcome. This section sets out the expected Outputs and Outcome of your project, how you expect to measure progress against these and how we can verify this.


- [Stage 2 Logframe Template](#)


Please complete your full logframe in the separate Word template and upload as a PDF using the file upload below – **please do not edit the template structure other than adding additional Outputs if needed as a logframe submitted in a different format may make your application ineligible**. Copy your Impact, Outcome and Output statements and your activities below - these should be the same as in your uploaded logframe.

Please upload your logframe as a PDF document.

 [RBG Kew TRAFFIC IWT R8 St2 Logical Framework Harnessing Technology to End the Illegal Trade in Succulents FINAL Mar22](#)

 22/03/2022

 19:40:40

 pdf 97.92 KB

Impact:

Illegal harvesting of wild populations of protected succulent plant species is reduced, supporting restoration efforts and the long-term recovery of these species in the wild.

Outcome:

The volume of illegal trade in succulent flora in South Africa and Namibia is reduced through empowerment and capacitation of law enforcement agencies and self-regulation by internet companies.

Project Outputs

Output 1:

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

Output 2:

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

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.

Output 4:

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

Output 5:

No Response

Do you require more Output fields?

It is advised to have fewer than 6 Outputs since this level of detail can be provided at the Activity level.

No

Activities

Each activity is numbered according to the Output that it will contribute towards, for example, 1.1, 1.2, 1.3 are contributing to Output 1.

Output 1

- 1.1. Analysis of online marketplaces based on data captured by web crawler (FloraGuard). (Kew & TRAFFIC)
- 1.2. Enhancements to web crawling algorithm technology, and the creation of a simulated IWT marketplace. (Kew)
- 1.3. Collection of supplementary trade information collected from other relevant data sources.(TRAFFIC)
- 1.4. Fieldwork and interviews with relevant stakeholders in South Africa and Namibia.(TRAFFIC)
- 1.5. Three field trips are undertaken to survey areas in Namibia.(TRAFFIC)
- 1.6 Report with findings of investigatory work under 1.1. - 1.5. produced and published. (Kew & TRAFFIC)

Output 2

- 2.1.1. Design and production of information and training materials to share with enforcement personnel.(TRAFFIC)
- 2.1.2. Training and mentorship of South Africa's junior Environmental Management Inspectors (EMIs).(TRAFFIC)
- 2.2. Awareness and training of an AI web-crawler tool (FloraGuard) given to senior law enforcement personnel within South Africa. (Kew)

Output 3

- 3.1 Evaluation of online trading policies to identify gaps or weaknesses relating to the trade in succulent flora.(TRAFFIC)
- 3.2 - 3.4. Engage with Internet companies directly and in collaboration with the Coalition to End Wildlife Trafficking Online. (Kew & TRAFFIC)

Output 4

- 4.1.1 Determine naturally occurring stable isotopes/elements within wild Conophytum spp. and identify which plant parts provide the best chemical signatures. (Kew)
- 4.1.2 Determine turnover rate of stable isotopes/elements within wild plants, once transferred to cultivated settings. (Kew)
- 4.2.1 Create geographical origin maps based on the stable isotope/elemental profiles at genus level and develop a stable isotope/elemental profile from 50-100 specimens. (Kew)
- 4.2.2 Test isotope/elemental profile against plants from marketplaces to determine origin of material. (Kew)
- 4.3.1 Using isoscape maps to reintroduce confiscated material back to the wild.(Kew)
- 4.3.2 Contribute to development of in-country reintroduction strategy for succulent species.(Kew)
- 4.4. Nursery trials to test isotope watering to mark plants under cultivation with a traceable isotope marker. (Kew)
- 4.5.1 Enforcement workshop for strategy development and implementation. (Kew)
- 4.5.2 Presentation at industry conferences. (Kew)

Section 11 - Budget and Funding

Q26. Budget

Please complete the appropriate Excel spreadsheet, which provides the Budget for this application. Some of the

questions earlier and below refer to the information in this spreadsheet.





Note that there are different templates for projects requesting under £100,000 and over £100,000. Please refer to the [Finance Guidance](#) for more information.

- [Budget form for projects under £100k](#)
- [Budget form for projects over £100k](#)

Please ensure you include any co-financing figures in the Budget spreadsheet to clarify the full budget required to deliver this project.

N.B.: Please state all costs by financial year (1 April to 31 March) and in GBP. The IWT Challenge Fund cannot agree any increase in grants once awarded.

Please upload your completed IWT Challenge Fund Budget Form Excel spreadsheet using the field below.

 [RBG Kew TRAFFIC Budget-for-IWT-R8-over-100k-Mar 22_Final](#)
 22/03/2022
 19:41:40
 xlsx 71.21 KB

Q27. Funding

Q27a. Is this a new initiative or does it build on existing work (delivered by anyone and funded through any source)?

New Initiative

Please provide details:

The project's scope and partnerships make this a new initiative for succulent plants. However, our approach is informed by several prior and ongoing funded activities:

EMI training forms part of an ongoing South African national mentoring programme implemented by TRAFFIC with the support of DFFE and funded by US Department of State Bureau of International Narcotics and Law Enforcement Affairs, Project Code SFOP0005708.

Training in AI tools builds on the project "Uncovering the Illegal Trade in South African Succulents" conducted by Kew, the University of Southampton, SANBI and DFFE in 2021. This was funded by the Defra IWT Challenge Rapid Response Fund (CV19RR12).

Engagement with and ongoing support to internet companies of the Coalition to End Wildlife Trafficking Online is provided by existing funding available to TRAFFIC, WWF & IFAW who facilitate this membership.

Analysis of stable isotopes provides key data to the World Forest ID programme, with a main consortium formed by RBG Kew, World Resources Institute, Agroisolab, US Forest Service International Programs and Forest Stewardship Council. Funding is provided by the US Forest Service International Programs and DEFRA. RBG Kew forms the main collection and curation centre, with expertise at Kew and Agroisolab available to the current project.

Q27b. Are you aware of any current or future plans for similar work to the proposed project?

Yes

Please give details explaining similarities and differences, and explaining how your work will be additional and what attempts have been/will be made to co-operate with and learn lessons from such work for mutual benefits.

We have liaised with Endangered Wildlife Trust (EWT) regarding their IWT R8 project proposal working with local landowners in South Africa. While the two projects are fundamentally different in scope and output, we recognise the potential for synergies within some activities, for instance where the same stakeholders may be contacted, and have agreed to coordinate on these activities where possible.

We have also spoken to SANPARKs regarding upcoming plans relating to the Southern African Development Community Transfrontier Conservation Area Financing Facility, where our project Outputs would support key initiatives such as the development of plant nurseries, as have been proposed for Namaqua National Park.

Q28. Capital items

If you plan to purchase capital items with IWT funding, please indicate what you anticipate will happen to the items following project end. If you are requesting more than 10% capital costs, please provide your justification here.

Laptops and hard drives procured for online trade analysis will remain with TRAFFIC and RBG Kew following the end of the project, for continued support where needed, to facilitate training within future projects and continuing online trade analysis work.

Q29. Value for Money

Please describe why you consider your application to be good value for money including justification of why the measures you will adopt will secure value for money.

The project builds on existing knowledge, networks and momentum, to holistically tackle the threat to succulent plants along all stages of the supply chain. The trade report produced will create a lasting and valuable resource, with the data behind it securely stored, for use within future trade related studies.

The tools and techniques developed by the project will remain available to project partners at organisation level, forming valuable resources that can be adapted and deployed in other illegal wildlife trade scenarios.

Laboratory experts based at Agroisolab, Source Certain and Kew bring vast experience to the project, not only in terms of laboratory techniques, but also in the application of provenance tracing technology to improve the transparency and regulation of consumer markets. This includes in the development of regulatory frameworks supported by industry stakeholders, who once informed of what is technically possible and of their responsibilities, are encouraged to drive the required systems change, as a form of continuing self-regulation [24-25].

With the succulent crisis in Southern Africa acting as a catalyst, we believe this project will deliver both short term protection for threatened species and scalable interventions for the long term, initiating a fundamental change in awareness and trading practices for threatened plants of all types, particularly in online settings, with far reaching benefits for biodiversity.

Section 12 - Safeguarding and Ethics

Q30. Safeguarding

Projects funded through the IWT Challenge Fund must fully protect vulnerable people all of the time, wherever they work. In order to provide assurance of this, projects are required to have appropriate safeguarding policies in place.

Please confirm the Lead Partner has the following policies in place and that these can be available on request:

Please upload the lead partner's Safeguarding Policy as a PDF on the certification page.

| | |
|--|---------|
| We have a safeguarding policy, which includes a statement of our commitment to safeguarding and a zero tolerance statement on bullying, harassment and sexual exploitation and abuse | Checked |
| We have attached a copy of our safeguarding policy to this application (file upload on certification page) | Checked |
| We keep a detailed register of safeguarding issues raised and how they were dealt with | Checked |
| We have clear investigation and disciplinary procedures to use when allegations and complaints are made, and have clear processes in place for when a disclosure is made | Checked |
| We share our safeguarding policy with downstream partners | Checked |
| We have a whistle-blowing policy which protects whistle blowers from reprisals and includes clear processes for dealing with concerns raised | Checked |
| We have a Code of Conduct for staff and volunteers that sets out clear expectations of behaviours - inside and outside the work place - and make clear what will happen in the event of non-compliance or breach of these standards | Checked |

Please outline how you will implement your safeguarding policies in practice and ensure that downstream partners apply the same standards as the Lead Partner.

If your project involves data collection and/or analysis which identifies individuals (e.g. biometric data, intelligence data), please explain the measures which are in place and/or will be taken to ensure the proper control and use of the data. Please explain the experience of the organisations involved in managing this information in your project

A full Data Protection Impact Assessment (DPIA) will be performed. Data generated by web crawling research will be stored and processed in line with the approach developed for previous, similar web crawling projects undertaken by Kew. Data gathered by team members within Kew will limit and remove sources of personal data before any analysis relating to the trade in plants is performed. Suitable hardware and software solutions will be employed, to keep sensitive data secure at all times. In all cases, research will comply with relevant national data protection legislation (GDPR in the UK and POPI Act in South Africa), and the data used within any published results will be anonymised.

Q31. Ethics

Outline your approach to meeting the key ethical principles, as outlined in the guidance.

Access and Benefit Sharing: Kew's Access to Genetic Resources and Benefit Sharing policy (<https://www.kew.org/sites/default/files/abs-policy.pdf>) has been in place since 2001 and ensures project material is legally acquired and any benefits are shared fairly as agreed with partners in Access and Benefit Sharing Agreements. This also applies to traditional knowledge and data. These are currently in place with proposed project partner.

Ethical considerations around the use of AI technologies will be considered within DPIA assessments. Relying on human analysis of data means that all data will be checked and verified using human expertise. This "human-in-the-loop" approach corresponds with the concept of "explainable AI", (where decisions can be justified, and "black box" AI solutions are avoided), and we will ensure these aspects of the methodology are always presented in a transparent and understandable way.

Section 13 - FCDO Notifications

Q32. FCDO Notifications


Please state whether there are sensitivities that the Foreign Commonwealth and Development Office will need to be aware of should they want to publicise the project's success in the Darwin Initiative in any country.

No


Please indicate whether you have contacted FCDO Embassy or High Commission to discuss the project and attach details of any advice you have received from them.

Yes

Please attach evidence of request or advice if received.

 [FCDO correspondence](#)

 22/03/2022

 16:50:35

 pdf 302.86 KB

Section 14 - Project Staff

Q33. Project staff

Please identify the core staff (identified in the budget), their role and what % of their time they will be working on the project.

Please provide 1-page CVs or job description, further information on who is considered core staff can be found in the [Finance Guidance](#).

| Name (First name, Surname) | Role | % time on project | 1 page CV or job description attached? |
|----------------------------|---------------------------|-------------------|--|
| Carly Cowell | Project Leader | 5 | Checked |
| David Whitehead | Project Manager | 70 | Checked |
| To be recruited | TRAFFIC Project Manager | 100 | Checked |
| David Newton | TRAFFIC Regional Director | 3 | Checked |

Do you require more fields?





Yes

| Name (First name, Surname) | Role | % time on project | 1 page CV or job description attached? |
|----------------------------|--------------------------------------|-------------------|--|
| Markus Burgener | TRAFFIC Senior Programme Coordinator | 7 | Checked |
| Sade Moneron | TRAFFIC ReTTA Research Officer | 15 | Checked |
| No Response | No Response | 0 | Unchecked |
| No Response | No Response | 0 | Unchecked |

| | | | |
|-------------|-------------|---|-----------|
| No Response | No Response | 0 | Unchecked |
| No Response | No Response | 0 | Unchecked |
| No Response | No Response | 0 | Unchecked |
| No Response | No Response | 0 | Unchecked |

Please provide 1 page CVs (or job description if yet to be recruited) for the project staff listed above as a combined PDF.

Ensure the file is named clearly, consistent with the named individual and role above.

 RBG Kew TRAFFIC CVs & TRAFFIC ToR
 22/03/2022
 19:46:26
 pdf 881.34 KB

Have you attached all project staff CVs?

Yes

Section 15 - Project Partners

Q34. Project partners

Please list all the Project Partners (including the Lead Partner), clearly setting out their roles and responsibilities in the project including the extent of their engagement so far and planned.

This section should demonstrate the capability and capacity of the Project Partners to successfully deliver the project. Please provide Letters of Support for all project partners or explain why this has not been included.

Lead partner name: Royal Botanic Gardens Kew

Website address: www.kew.org; www.kew.org/science; www.kew.org/about-us/press-media/manifesto-for-change-2021

Details (including roles and responsibilities and capabilities and capacity):

As lead, RBG Kew will be responsible for implementation of technical areas of the project including analysis and guidance of target searches by the web crawlers, training in AI search methods, isotope/elemental analysis of Conophytum spp. and the overall project management, project finances and reporting.

As a World leading plant science institute, Kew is committed to intensifying efforts to understand and protect plants and fungi, help to end the extinction crisis and contribute to creating a world where nature is protected, valued by all and managed sustainably.

Kew's more than 300 scientific staff are engaged in cutting edge research spanning a wide range of disciplines and have considerable experience in delivering science-based knowledge to protect biodiversity. This includes expertise in laboratory isotope techniques and succulent taxonomy and ecology, which will be available to the project via in-kind support and informal networks.

Our Project Lead, Dr. Carly Cowell, spent more than 20 years working as a plant scientist within South Africa, and brings to the project longstanding working relationships with South African institutes, detailed knowledge of at-risk species and habitats, and an understanding of the challenges of implementing conservation solutions within the context of South Africa.

Allocated budget (proportion or value):



Represented on the Project Board

Yes

Have you included a Letter of Support from this organisation?

Yes

Have you provided a cover letter to address your Stage 1 feedback?

Yes

Do you have partners involved in the Project?

Yes

1. Partner Name: TRAFFIC

Website address: <https://www.traffic.org/>

Details (including roles and responsibilities and capabilities and capacity):

As partner and wildlife trade specialists, TRAFFIC will be responsible for the in-country field work and data collection (interviews, seizures, court cases, etc.), subsequent analysis and development of a succulent trade report as well as other guidance and training material. This material will be used to deliver training and capacity building for law enforcement personnel through matched funding.

The analysis of online trade dynamics in succulents will be used as the basis as which to engage with internet companies through an existing partnership (Coalition to End Wildlife Trafficking Online) jointly facilitated by TRAFFIC and other NGOs. TRAFFIC will work alongside the Coalition to educate and support internet companies in the amendment of policies, the detection of suspicious adverts and encourage them to educate their users about the illegal trade in succulent flora.

Allocated budget: ██████████

Represented on the Project Board Yes

Have you included a Letter of Support from this organisation? Yes

2. Partner Name: Department of Forestry, Fisheries and the Environment (DFFE) in South Africa

Website address: <https://www.dffe.gov.za/>

Details (including roles and responsibilities and capabilities and capacity): As a non-financial collaborating partner, DFFE's Compliance and Enforcement Branch supports the training and mentorship of law enforcement personnel by identifying and making available junior and senior Environmental Management Inspectors (EMIs) for capacity building.

Allocated budget: ██████████

Represented on the Project Board No

Have you included a Letter of Support from this organisation? Yes

3. Partner Name: South African National Parks

Website address: <https://www.sanparks.org/>

Details (including roles and responsibilities and capabilities and capacity):

Will provide access to the Arid Region National Parks and assist with collection of wild source plant samples for laboratory testing. The application of relevant project Outputs may be facilitated through the SADC TFCA Financing Facility.

Allocated budget: ██████████

Represented on the Project Board No

Have you included a Letter of Support from this organisation? Yes

4. Partner Name: Agroisolab

Website address: <https://www.agroisolab.com>

Details (including roles and responsibilities and capabilities and capacity): Agroisolab will perform laboratory work to analyse the stable isotope content of plant samples. Expertise will be provided to interpret results, create geographical isotope distribution maps, and plan refinements to the next iterations of experimental work.

Agroisolab have a wealth of experience in providing isotope analysis to the agricultural sector including in the analysis of eggs, oil, pork, caviar and wine. Within wildlife forensics, the laboratory supports the established World Forest ID forensic timber tracing programme, and provenance testing of ivory in conjunction with WWF [24].

Agroisolab is ISO accredited according to the 2018 update of ISO 17025 by DAkkS. The laboratory's accreditation number is: D-PL-14370-01-00.

Allocated budget: ██████████

Represented on the Project Board No

Have you included a Letter of Support from this organisation? Yes

5. Partner Name: Source Certain International

Website address: <https://www.sourcecertain.com/>

Details (including roles and responsibilities and capabilities and capacity):

Source Certain International will analyse the trace element content of plant samples, to determine the best “cocktail” of trace elements that contribute to the unique chemical signatures of South African Conophytum species.

This laboratory has been selected for its proven track record in supply chain analysis, with demonstrated impact. Since 2016, the laboratory has utilised TSW Trace as a supply chain integrity tool to scientifically verify the claimed provenance of food and non-food items, through a comparison of physical product samples with references collected from a known point of origin.

The technology brings together 40 years of research and is routinely employed by Source Certain’s Forensic Science Services team who share over 60 years of experience and are world leaders in provenance science.

Examples TSW Trace application include the analysis of shrimp fisheries to screen out adulterated products, and gold fingerprinting to help recover gold stocks stolen from mine deposits [25].

The facility is experienced in receiving and handling samples of biological material, including the use of Approved Arrangement facilities within Australia, in which sample material can be held.

Source Certain work to ISO 17025 standards and are working towards this accreditation for their new facility.

Allocated budget: ██████████

Represented on the Project Board No

Have you included a Letter of Support from this organisation? Yes

6. Partner Name: University of Southampton

Website address: <https://www.ecs.soton.ac.uk/>

**Details
(including roles
and
responsibilities
and capabilities
and capacity):**

The University of Southampton (UoS) will provide training and technical support for the deployment of the AI online search software and methodology. This technology was first developed by UoS in partnership with RBG Kew in the "FloraGuard" Project (2018-2020) and "Uncovering the Illegal Trade in South African Succulents" (2021).

UoS will supply a computer science specialist to support training in AI tools and work on refinements to existing algorithms, incorporating the latest developments in AI search techniques developed by UoS, where these prove suitable for IWT research. A simulated IWT marketplace will be created, to help facilitate training.

Supervision and guidance will be supplied by Dr Stuart Middleton, Associate Professor in Computer Science and Turing Fellow. Dr Middleton's work focuses on natural language processing for information extraction, and he regularly advises on the use of AI technology at government level.

Support in the deployment of AI tools will also be provided by Dr Anita Lavorgna, Associate Professor in Criminology at UoS. Dr Lavorgna was Principle Investigator in the original FloraGuard study, and will provide training on the methodology and qualitative assessment of online data.

Allocated budget:



Represented on the Project Board No

Have you included a Letter of Support from this organisation? Yes

If you require more space to enter details regarding Partners involved in the project, please use the text field below.

No Response

Please provide a cover letter responding to feedback received at Stage 1 if applicable and a combined PDF of all letters of support.

[RBG KEW TRAFFIC Stage 2 Cover Letter Harnessing Technology to End the Illegal Trade in Succulent Plants 22.03.22](#)
 22/03/2022
 19:50:30
 pdf 244.05 KB

[LoS merged](#)
 22/03/2022
 15:45:30
 pdf 875.92 KB

Section 16 - Lead Partner Capability and Capacity

Q35. Lead Partner Capability and Capacity

Has your organisation been awarded IWT Challenge Fund funding before (for the purposes of this question, being a partner does not count)?

Yes

If yes, please provide details of the most recent awards (up to 6 examples).

| Reference No | Project Leader | Title |
|--------------|------------------|---|
| 28-012 | Maria Vorontzova | Native grass forage management to feed people and protect forests |
| CV19RR01 | Martin Hamilton | Impacts and consequences of Covid-19 on conservation in the BVI |
| CV19RR12 | Carly Cowell | Uncovering the illegal online trade in South African succulents |
| 27-014 | Aaron Davis | Coffee natural capital for environmental and livelihood sustainability in Uganda |
| 26-024 | Bente Klitgaard | Improving indigenous Bolivian Chiquitano people's livelihoods through sustainable forest management |
| DPLUS084 | Martin Hamilton | Identifying and conserving resilient habitats in the British Virgin Islands |

Have you provided the requested signed audited/independently examined accounts?

If yes, please upload these on the certification page. Note that this is not required from Government Agencies.

Yes

Section 17 - Certification

Q36. Certification

On behalf of the

Trustees

of

ROYAL BOTANIC GARDENS KEW

I apply for a grant of





██████████

I certify that, to the best of our knowledge and belief, the statements made by us in this application are true and the information provided is correct. I am aware that this application form will form the basis of the project schedule should this application be successful.









(This form should be signed by an individual authorised by the applicant institution to submit applications and sign contracts on their behalf.)

- I have enclosed CVs for project key project personnel, letters of support, budget, logframe, safeguarding policy and project implementation timetable (uploaded at appropriate points in application).
- Our last two sets of signed audited/independently verified accounts and annual report (or other financial evidence – see [Financial Guidance](#)) are also enclosed.





Checked

| | |
|--|--|
| Name | Prof Alexandre Antonelli |
| Position in the organisation | Director of Science |
| Signature (please upload e-signature) |  IWT Certification  21/03/2022  15:02:30  pdf 332.19 KB |
| Date | 17 March 2022 |

Please attach the requested signed audited/independently examined accounts.

| | |
|---|--|
|  RBG-Kew-Annual-Report-2020-2021-Web-accessible-final  22/03/2022  11:35:47  pdf 822.21 KB |  annual-report-accounts-1920  22/03/2022  11:35:40  pdf 785.52 KB |
|---|--|

Please upload the Lead Partner's Safeguarding Policy as a PDF

| |
|---|
|  Safeguarding-Policy-January-2022  22/03/2022  11:36:45  pdf 389.28 KB |
|---|

Section 18 - Submission Checklist

Checklist for submission

| | Check |
|--|--------------|
| I have read the Guidance, including the "IWT Challenge Fund Guidance", "Monitoring Evaluation and Learning Guidance", "Risk Guidance" and "Financial Guidance". | Checked |
| I have read, and can meet, the current Terms and Conditions for this fund. | Checked |
| I have provided actual start and end dates for the project. | Checked |
| I have provided my budget based on UK government financial years i.e. 1 April - 31 March and in GBP. | Checked |
| I have checked that our budget is complete, correctly adds up and I have included the correct final total at the start of the application. | Checked |
| The application been signed by a suitably authorised individual (clear electronic or scanned signatures are acceptable). | Checked |
| I have attached my completed logframe as a PDF using the template provided | Checked |
| (If copying and pasting into Flexi-Grant) I have checked that all my responses have been successfully copied into the online application form. | Checked |

| | |
|---|---------|
| I have included a 1 page CV or job description for all the Project Staff identified at Question 33, including the Project Leader, or provided an explanation of why not. | Checked |
| I have included a letter of support from the Lead Partner and partner(s) identified at Question 34, or an explanation of why not. | Checked |
| I have included a cover letter from the Lead Partner, outlining how any feedback received at Stage 1 has been addressed where relevant. | Checked |
| I have included a copy of the Lead Partner's safeguarding policy, which covers the criteria listed in Question 30. | Checked |
| I have been in contact with the FCDO in the project country/ies and have included any evidence of this. If not, I have provided an explanation of why not. | Checked |
| I have included a signed copy of the last 2 annual report and accounts for the Lead Partner, or other evidence of financial capacity as set out in the Financial Guidance, or provided an explanation if not. | Checked |
| I have checked the IWT Challenge Fund website immediately prior to submission to ensure there are no late updates. | Checked |
| I have read and understood the Privacy Notice on the IWT Challenge Fund website. | Checked |

We would like to keep in touch!

Please check this box if you would be happy for the lead applicant (Flexi-Grant Account Holder) and project leader (if different) to be added to our mailing list. Through our mailing list we share updates on upcoming and current application rounds under the Darwin Initiative and our sister grant scheme, the IWT Challenge Fund. We also provide occasional updates on other UK Government activities related to biodiversity conservation and share our quarterly project newsletter. You are free to unsubscribe at any time.

Unchecked

Data protection and use of personal data

Information supplied in the application form, including personal data, will be used by Defra as set out in the **Privacy Notice**, available from the [Forms and Guidance Portal](#).

This **Privacy Notice must be provided to all individuals** whose personal data is supplied in the application form. Some information may be used when publicising the Darwin Initiative including project details (usually title, lead partner, project leader, location, and total grant value).