



Department
for Environment
Food & Rural Affairs

Illegal Wildlife



Trade (IWT) Challenge



Annual Report

To be completed with reference to the “Project Reporting Information Note”:
(<https://iwt.challengefund.org.uk/resources/information-notes/>).

It is expected that this report will be a **maximum** of 20 pages in length, excluding annexes)

Submission Deadline: 30th April 2022

IWT Challenge Fund Project Information

Project reference	IWT070
Project title	Saving lions by reducing trafficking in their parts
Country/ies	Mozambique and South Africa
Lead partner	Endangered Wildlife Trust (EWT)
Project partner(s)	Peace Parks Foundation, Freeland, Mozambique Wildlife Alliance, National Administration of Conservation Areas (ANAC), Mozambique Customs, and South African National Parks
IWTCF grant value	£438,824.85
Start/end dates of project	1 October 2019 – 31 March 2023
Reporting period (e.g. April 2021- Mar 2022) and number (e.g. Annual Report 1, 2, 3)	April 2021 – March 2022 Annual Report 3
Project Leader name	Dr David Mills
Project website/blog/social media	ewt.org.za
Report author(s) and date	Dr David Mills, 30 April 2022

Note:

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1. Project summary

The project addresses the illegal trade in lion parts in the Great Limpopo Transfrontier Park (GLTP), specifically Limpopo and Kruger National Parks (the project area). Here, lions are threatened due to targeted poisoning and snaring for body parts for local and international illegal trade. We will address these threats through:

1. Developing on the ground anti-poaching and poison response strategies;
2. Strengthening law enforcement capacity through targeted training; and,
3. Understanding and breaking the supply chains for lion products.

Mozambique's Limpopo National Park (NP), along with South Africa's Kruger National Park (NP), form key components of one of Africa's most important lion conservation areas – the GLTP. Lions in this region of the GLTP are under severe threat from targeted poisoning and snaring for body parts for local and international illegal trade, resulting in declines in lion abundance of 50–68% in some parks. In one study area in Limpopo NP, between 2011–2018, 49% of the lions killed (n=51) were illegally killed for their body parts, with a significant increase in killing from 2011–2014. From 2014–2017, an average of 4.5 lions were killed for their parts per year. Heads, faces, paws and bones were taken. The declining trend in lion numbers is range-wide, with the exception of four southern African countries (Botswana, Namibia, South Africa and Zimbabwe). We also note with concern the number of poisoning events in western Kruger NP has risen in 2018–2019. Lion prides in eastern Kruger are contiguous with those in Limpopo NP and are likely to face the same precipitous decline their counterparts are undergoing just across the border. Illegal trade in lion parts affects at least nine communities in the Mozambique portion of the GLTP. Lion poaching is linked to other illegal activities like rhino, elephant and bushmeat poaching, and weapon and car smuggling. This has led to a deterioration of social systems and human wellbeing, including a significant increase in importation of alcohol, plastic garbage, non-registered vehicles and unlearned, often intoxicated drivers. Several schools have closed due to increases in violent youth gangs intimidating teachers. Poaching gangs hamper policing efforts and have blockaded roads, making parts of the parks off-limits to tourists, thus negatively affecting tourism revenue. It is clear that dismantling these networks will have social benefits to the communities and through increasing capacity of the Lion protection unit from 4 rangers to 12 rangers, we will be increasing their skill sets, developing career paths and providing legal income to the rangers and their dependents.

There is evidence that this lion body part trafficking is part of an intricate illegal wildlife supply chain trafficking network from Africa to Asia.



Figure 1. Operational area indicating the project area for Lion monitoring and ranger patrol optimisation and the training locations for Mozambique Customs officials.

2. Project partnerships

Peace Parks Foundation (PPF) – Over the past year, LNP has gained new PPF leadership: Dr Bradley Schroder, Senior Project Manager; Samuel Davidson-Phillips, Project Manager; and Glen Steyn, Counter Poaching Coordinator. Dr Schroder, being a scientist, has expressed interest in assisting with scientific planning and data collection. We have worked with Mr Davidson Phillips on our Cheetah and Wild Dog Range Expansion Projects and are excited to see him in this new role.

As a co-manager of LNP, PPF is a critical partner in this project and will ultimately be responsible for the sustainability of successful conservation interventions that allow Lions to persist and thrive in LNP.

Wildlife authorities (ANAC, SANParks) – The Administração Nacional das Áreas de Conservação (ANAC) in Mozambique and South African National Parks (SANParks) are essential partners. We cannot operate within the protected areas without their buy-in and permission. We have received permits from both wildlife authorities to conduct this work (Annex 4 and Annex 5).

SANParks has been instrumental in all Lion collarings in KNP by providing free veterinary and technical expertise. During this financial year, there have been several changes in leadership in northern Kruger, including the departure of Tinyiko Golele as Regional Ranger. Don English has taken over her role and has taken a keen interest in the collared Lions. Following a meeting organised by Andre Botha, EWT Vultures for Africa Manager, and the person responsible for Activity 2 in this project, many more Section Rangers have taken an active interest in the project and have asked for access to our EarthRanger instance so they can track live locations and deploy rangers accordingly.

Mozambique Customs Officials – Kerushka Pillay, the Wildlife in Trade Training Coordinator at the EWT, has established a relationship with the Mozambican Revenue Authority, specifically with Mr Herculano Cintura from the International Cooperation Directorate, Mr Jeronimo Momba, the head of the Intelligence department in the Southern Region, and Ms Ana Ribeiro da Cruz from the International Affairs Department of the Mozambique Revenue Authority. Mr Cintura is acting as the liaison for the project and is our contact with the President of the Mozambique Revenue Authority, Dr Amélia Muendane. Dr Muendane has given formal permission for the online training to take place.

As outlined in our change request of December 2021, which was subsequently approved by IWT, we have changed Output 3 (The capacity of customs law enforcement officials in Mozambique is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection) from in-person training of Mozambican Customs officials to online training. This change was necessary due to travel and meeting restrictions imposed during COVID-19 in both Mozambique and South Africa that made the planning of in-person training and travel very unpredictable. In addition to overcoming these uncertainties, online training has some advantages over in-person training, such as allowing participants to have more flexibility in when they do the training, allowing them to work at their own pace, and allowing them to go back and review parts of the training at any time. Online training has been shown to be effective over the last few months when remote working has become much more common.

Development of the training materials has started, with species and subject matter experts creating voice-over presentations on relevant theory, while a film company has been contracted to make demonstration films with experts explaining how to identify threatened species affected by illegal trade. All presentations and films will be available in Portuguese, either in the form of subtitles or spoken Portuguese, depending on who develops the materials. The course content should be ready by early July 2022. Participants will be provided with data to access the materials online, but the Learning Management System (LMS) will also allow participants to download materials and work offline.

Kerushka Pillay has thoroughly investigated eLearning options as a possible training method and has used this information to guide our decision on the best LMS suited to EWTs training needs.

Black Mambas – The Black Mambas were identified as a partner in this project because they are an all-female anti-poaching unit, who could work with the LPUs to share experiences as women in this field. We submitted a change request, which was approved, to allow senior female rangers from SANParks to perform this role. The continued closure of the Giryondo Border Post has prevented us from moving

forward on this. Our understanding is that the border will reopen soon. We have also been in discussion with the International Anti-Poaching Foundation regarding the potential participation of the all-female Akashinga Rangers from Zimbabwe in this project. If this is possible, we will submit an appropriate logistical change request.

Freeland – Freeland completed their participation in this project in Y3Q1. They submitted a final report, which was summarised in our Y3HY Report and will be expanded upon in this report. While there have been some financial reporting challenges related to confusion around reporting against established line items, this has now been resolved. They again requested a cross-year change request in the Y2 Annual Report, despite being asked repeatedly if they required change requests well in advance. We are grateful that DEFRA has again approved this change request.

Mozambique Wildlife Alliance (MWA) – MWA continues to provide veterinary services free of charge. They are extremely supportive of our work and are a highly collaborative organisation. They work throughout Mozambique with almost all conservation organisations and have close ties to ANAC. They therefore provide an important link between conservation practitioners. They plan to create a Mozambique Lion Forum that will bring experts together to guide Lion conservation in the country.

Panthera – After playing a key role in the development and submission of this proposal, Panthera decided to cease its work in LNP. At that time, the EWT was given the opportunity to revise the proposal to fill the gap left by Panthera's departure. The EWT proposed to hire a field officer to fulfil the role formerly played by Panthera. The original proposal was revised and the financial change request was approved prior to the signing of this grant contract.

3. Project progress

3.5 Progress in carrying out project Activities

Output 1: By December of Year 3, lion poaching for parts has been reduced by >80% in the Mozambican GLTP, resulting in a measurable increase in wild lion abundance and range.

Activity 1.1: Advertise the position of Field Officer and hire a candidate to implement the project.

Progress: This activity was completed in Y1

Activity 1.2: Provide refresher training for existing rangers including the existing Lion Protection Unit teams in Year 2. Refresher Training shall be undertaken over 10 days and shall include, conservation training (5 days), legal arrest procedures (2 days) and SMART (3 days).

Progress: Ranger training was delayed for two years due to COVID. In March 2022, payment was made to the South African Wildlife College. Training began in April and continues as we write this report. A total of 104 rangers in LNP will receive training by the end of April 2022. The training schedule is available in Annex 6.

Activity 1.3: Selection of successful refresher training candidates for the creation of 2 additional 4-person Lion Protection Units.

Progress: The same 12 rangers continue to be employed by PPF and are organised as a single LPU. All received advanced training.

Activities 1.4: Deploy and manage all three Lion Protection Units in known important lion areas.

Progress: The LPU continues to be deployed. Due to ranger shortages, they are sometimes deployed with the Lion field officer to search for Lions in the primary study area along the Mozambique-South Africa border. Other times they are split among regular APUs. While on patrol with the regular APUs across all LNP, they record sign of Lions and other carnivores, giving us a picture of Lion distribution across the entire park (Figure 2).

Activity 1.5: Document changes in earnings and clarify number of dependents of LPU rangers.

Progress: Due to hostilities within local communities, and the fact that many APU rangers come from families with members who engage in poaching, it remains difficult to gather information on earnings. However, the Lion Recovery Fund has provided funding to hire a Mozambican field assistant. We will task this person with forging the trust required to collect this information. We expect this person to be hired in May 2022.

Activity 1.6: Purchase an additional vehicle for lion monitoring, register and insure vehicle.

Progress: The vehicle was purchased in Y1

Activities 1.7–1.8: Hold a knowledge exchange session between the Black Mambas and the APUs in the GLTP; Compile a report on the Black Mamba exchange.

Progress: The Black Mambas are no longer involved in this project. We have arranged with female rangers in KNP to participate in the knowledge exchange session. However, this has been hampered by the continued closure of Giriyondo Border Post. We have recently discussed with the International Anti-poaching Foundation regarding the possibility of the Akashinga Rangers participating in this exchange.

Activity 1.9 Lion Protection Units conduct patrols; patrols are 3–5 days in length and cover a minimum of 10 km per day in important lion areas.

Progress: See Activity 1.4

Activity 1.10 Lion Protection Units find, record, and remove or destroy all snares, traps, and poison from important lion areas.

Progress: During the reporting period, 601 snares and 27 gin traps were detected, two firearms confiscated, and 25 suspects arrested.

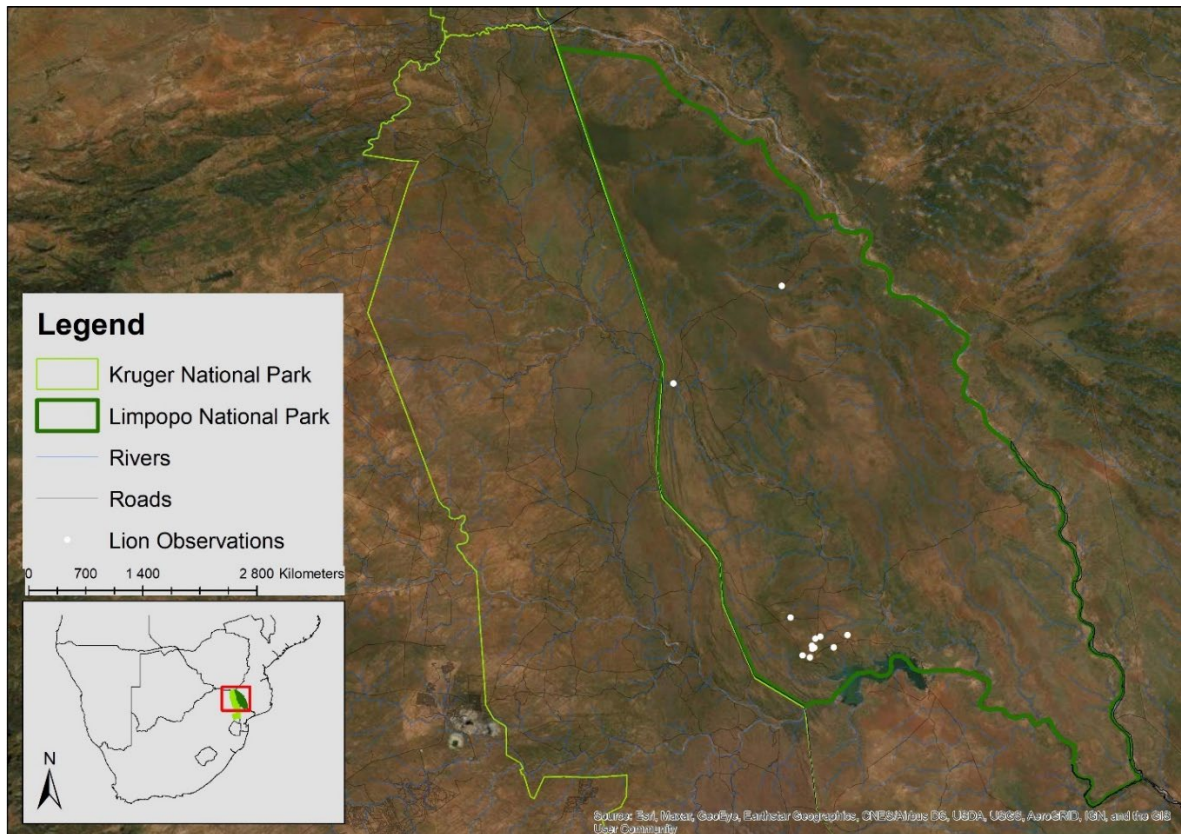


Figure 2. Locations of Lion tracks recorded by anti-poaching units on patrol during the reporting period.

Activity 1.11 *Lion Protection Units arrest suspected poachers, and hand over suspects to police with all necessary documents to support a prosecution.*

Progress: The Park Security Team is currently following up on 5 prosecutions.

Activity 1.12 *Lion Protection Units record all patrol data and poaching data in SMART and de-brief with APU leader and SMART technician daily.*

Progress: The LPU and regular APUs continue to record patrol data, including carnivore sign, and submit to the Cmore technician daily.

Activity 1.13: *Conduct regular follow ups on legal proceedings to evaluate prosecution success resulting from our arrests.*

Progress: The PPF Antipoaching team continues to follow up on legal proceedings related to arrests in LNP. During Y3, they arrested 25 individuals and assisted with 8 convictions.

Activity 1.14: *Conduct call-up and spoor surveys along the border between Kruger and Limpopo National Parks to identify potential prides for collaring.*

Progress: We have continued to conduct callups to collar Lions in LNP; however, Lions in LNP are incredibly skittish. The Lion Recovery Fund has provided 63 camera traps to assist with identifying Lion activity and important Lion areas. We are confident that these cameras will provide valuable information regarding prides that could be protected by collaring.

Activities 1.15: *Combine lion survey results with recent poaching and poisoning events to identify three prides that are at the greatest risk.*

[REDACTED]

[REDACTED]

[REDACTED]

Activity 1.16 Collar one female from the three prides and one male of each coalition utilising their pride area.

Progress: We have collared eight females and three males in high-risk areas.

Activity 1.17: Use lion movement data from GPS collars and spoor data integrated into SMART to direct deployment of ranger teams (existing and new) in important lion areas.

Progress: All senior rangers in LNP have access to live Lion locations through EarthRanger. They deploy rangers to these areas when the Lions approach high risk areas. As of January 2022, Kruger rangers are suddenly extremely enthusiastic about viewing lion movements through EarthRanger to inform patrols. We started engaging with rangers in early 2021 for both lion and wild dog monitoring. Only a few joined the cause, including Andrew Desmet and Craig Reid. In January, Andre Botha from our Vultures for Africa Programme, accompanied by Kulani Nyakane (from the Carnivore Conservation Programme) held a meeting for Kruger rangers to explain the Eye in the Sky vulture monitoring platform. Since then, rangers have been asking for access and are monitoring the collared lions. This is partly due to several changes in leadership within Kruger. We are embracing and nurturing this interest with the aim of making sure it is sustained.

Activity 1.18: Conduct ongoing surveys to update lion population status and habitat use and to measure the impact of poaching on lion viability.

Progress: We continue to monitor 11 Lions and their prides or coalitions. This includes three groups in northern Kruger. We have received 63 camera traps from the Lion Recovery Fund. These will be used to census Lions across LNP and KNP. We will launch this large scale survey in Y4Q2 based on the outputs of a workshop we were asked by the Lion Recovery Fund to organise. This workshop brought together 31 experts in counting Lions, prey, and other predators to agree on a standardised approach to understanding Lion populations (Annex 7)

Activity 1.19: Use SMART data and lion movement data to identify prides farther into both Limpopo and Kruger NP for collaring, focusing on prides recolonizing extirpated home ranges in Mozambique.

Progress: Through a combination of Lion sightings and sign reported by general APU patrols and the new camera traps, we will map the occupancy of Lions across LNP and deploy collars where necessary.

Activity 1.20: Use lion population data to monitor lion population trends and SMART data to monitor poaching trends.

Progress: In addition to the data recorded in SMART/Cmore by the APUs, we are adding camera traps and an upcoming large scale census to map population status and identify trends compared to historic estimates.

Output 2: The impact of poisoning on lions and other wildlife is reduced through effective proactive and reactive response strategies.

Activity 2.1: Poison Intervention Training in the GLTFCA was provided by the Vultures for Africa and Carnivore Conservation Programme as follows:

06–10 June 2021 LNP, 44 rangers (covered by this grant)

12–13 June 2021 Bahnine, 25 rangers

09–10 October 2021 Zinave, 10 rangers

16–17 October 2021 Zinave 10 rangers

05–28 October 2021 Kruger Park, refresher training, 270 rangers

19–26 January 2022, Gonarezhou Park, Zimbabwe, 58 rangers and Community Liaison Officers

[REDACTED]

Attendance registers are available in Annexes 8a–e. Training protocols in English and Portuguese are available in Annexes 9 and 10.

Activity 2.2: At least one poison reaction kit and aide memoire per trainee distributed at the end of each training intervention to provide additional support post training by the end of Year 1

Wildlife Poisoning Response Kits: We do not issue kits to individual rangers, but rather to ranger sections or pickets as recommended by Park management during training. A total of 16 WPRK's were issued in Mozambique and 56 in the Kruger National Park as follows:

May-July 2020 – 56 kits to the Kruger National Park, 2 Kits were issued per Ranger Section in the KNP as well as to Veterinary Services, the State Veterinary Service and the SAPS Stock Theft Unit.

04-16 June 2021 – 6 kits to Limpopo National Park and 6 kits to Banhine National Park

February 2022 – 4 kits to Zinave National Park

Oct 2020 – 3 Wildlife Poisoning Aide Memoires (in English) were issued per ranger section for use by the Section Ranger and Sergeants/Corporals within each section. A total of 89 were issued for use in the Kruger National Park as agreed with SANParks.

June 2021 – Each learner that participated in training in the Limpopo and Banhine National Parks were issued with a copy of the Aide Memoire in Portuguese. A total of 69 were issued.

January 2022 – 58 learners that participated in the abovementioned training were issued with an English version of the Aide Memoire.

February 2021 – All 20 learners that participated in the training at Zinave National Park received a copy of the Portuguese version of the Aide Memoires.

Activity 2.3: A Poison Response Strategy (PRS) which facilitates rapid response and effective management of poisoning events involving all relevant role-players has been drafted by the end of Year 1.

Progress: This was severely curtailed by the Covid-pandemic and the only engagement that was possible in this regard was during the above Wildlife Poisoning training events when the drafting and implementation of individual wildlife poisoning strategies for each area was discussed. PPF has been trying to coordinate an overall strategy for the GLTFCA, but this is still in process.

Activity 2.4: Stakeholder approval for the draft PRS is secured by the end of Year 2.

Progress: See Activity 2.3.

Activity 2.5: Within one year of approval, the PRS has been implemented for at least one poisoning incident

Progress: See Activity 2.3.

Activity 2.6: Establish baseline poisoning mortality for the border region between Kruger NP and Limpopo NP and compare this to established recent baselines from adjacent areas in Limpopo NP by the end of Year 1. Reduce poisoning mortality by 60% against these baselines by the end of Year 3.

We continue to collect data on poisoning and mortalities across the project area. Data from 2015–2022 are represented in Figures 3–5. We have not detected any poison related Lion mortalities in the project area during the last financial year. However, more than 100 vultures of 3 species were killed in 2021. However, as indicated by the table in Fig. 5, it is evident that the faster response and follow-up to poisoning incidents have resulted in significantly less mortalities compared to the previous two years.

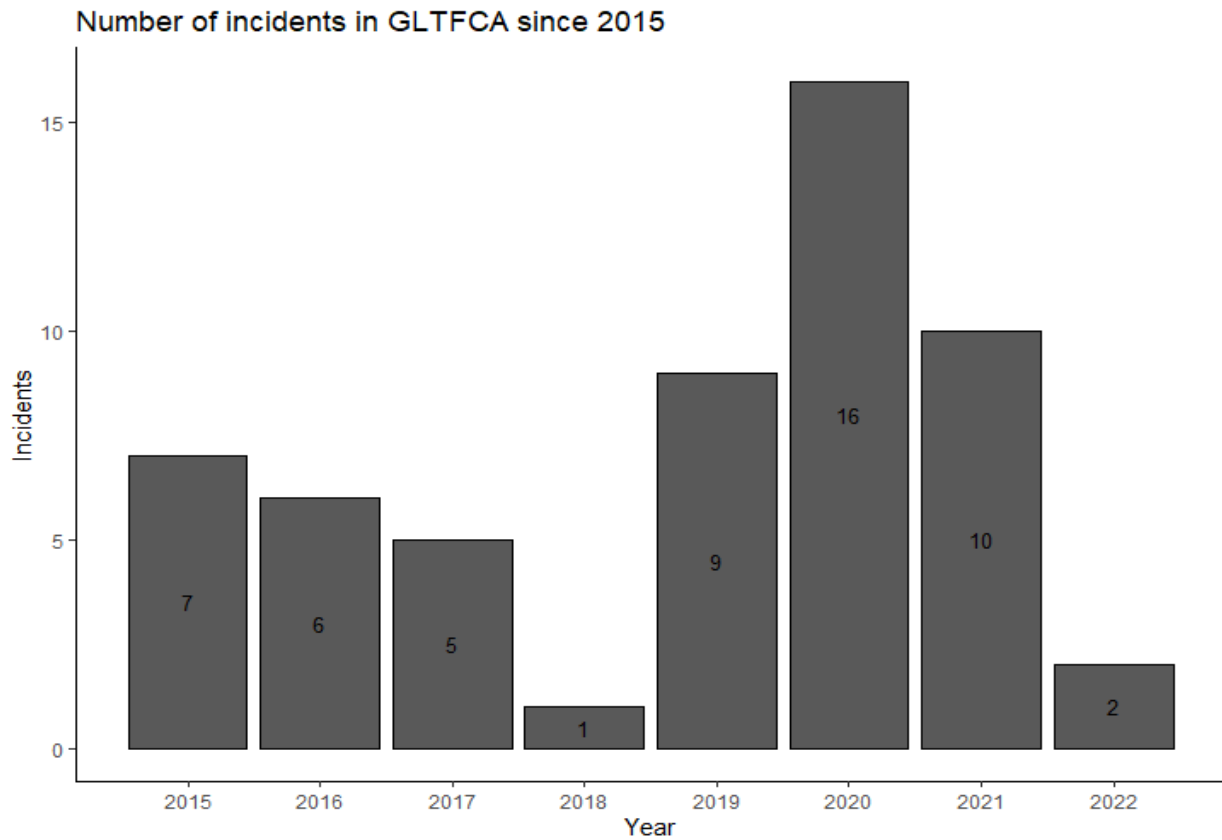


Figure 4. Poison incidents in the Great Limpopo Transfrontier Conservation Area from 2015–2022.

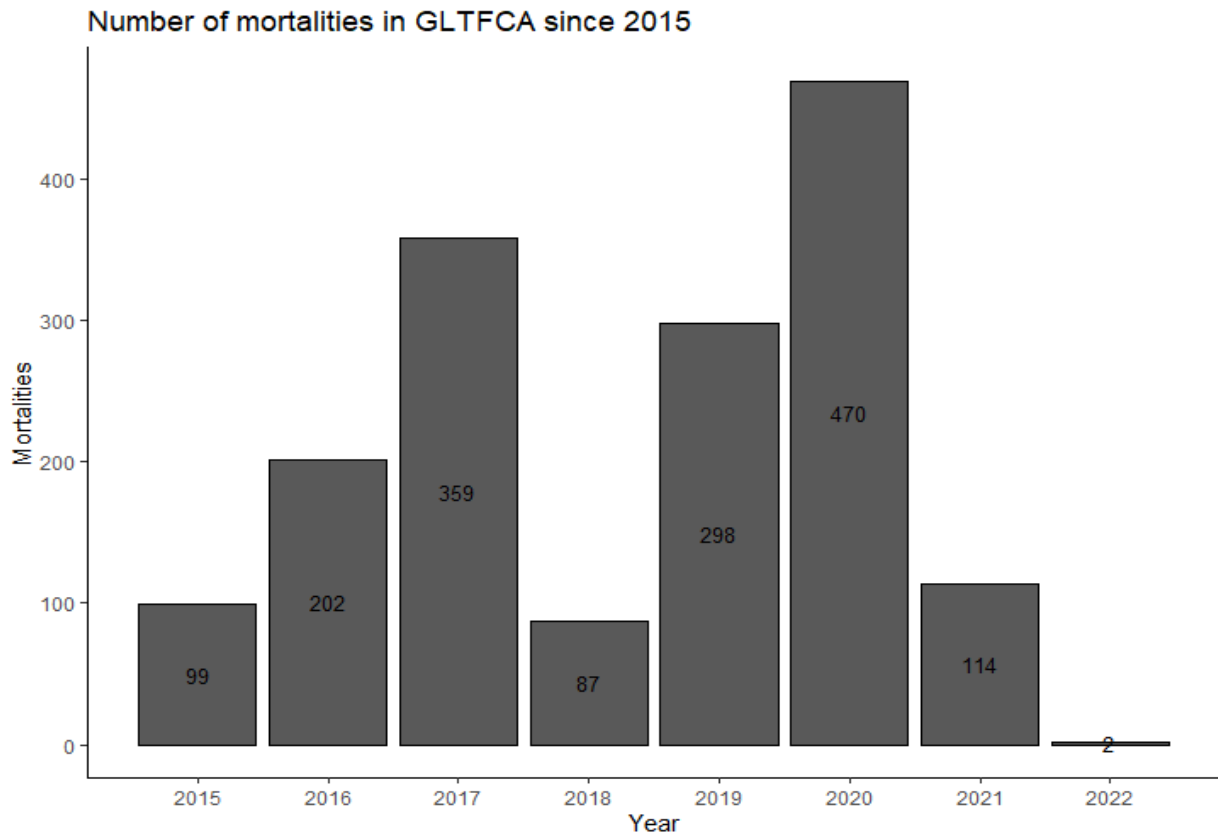


Figure 3. Number of wildlife mortalities from poison in the Great Limpopo Transfrontier Conservation Area from 2015–2022.

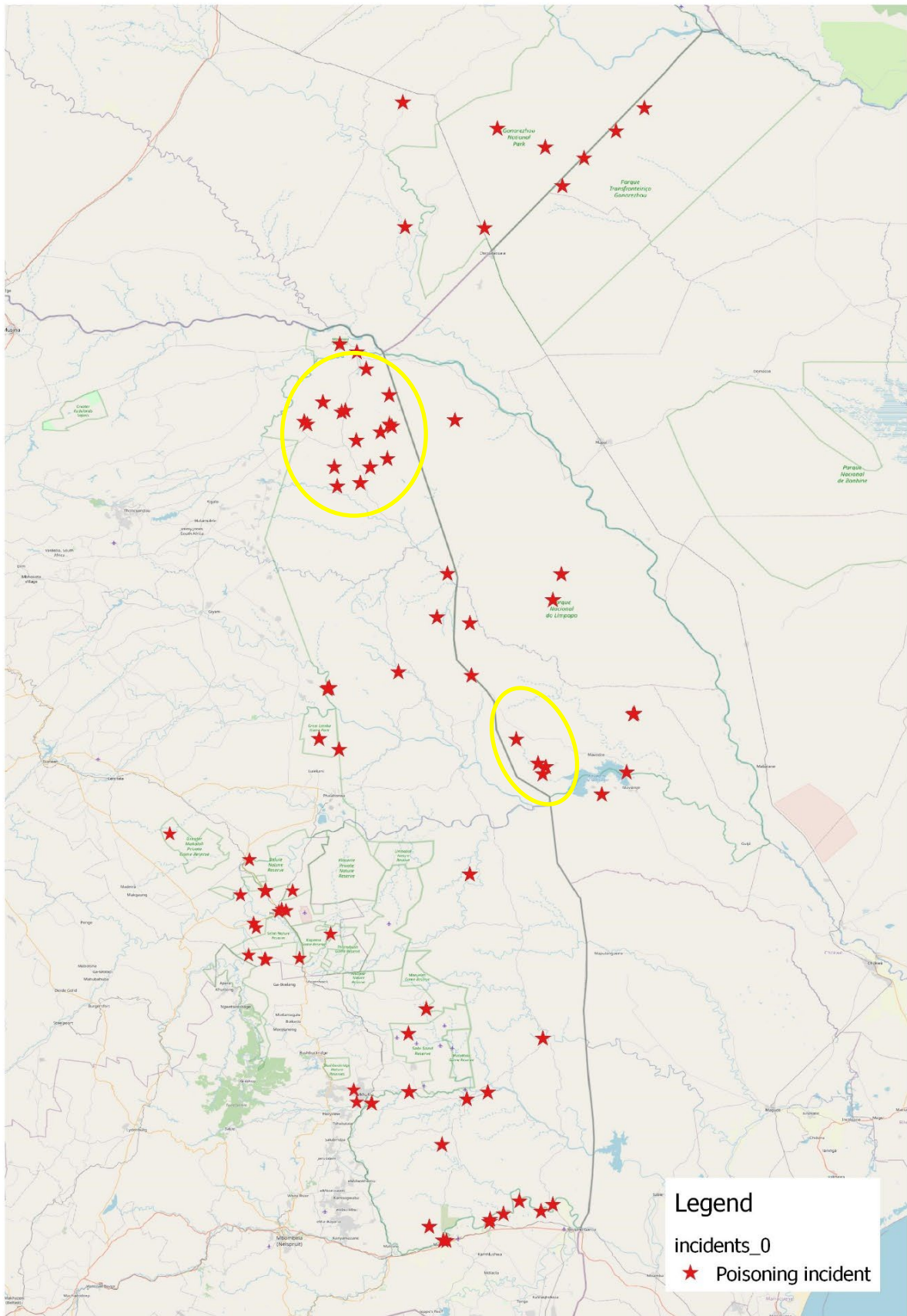


Figure 5. Poison incidents across the Great Limpopo Transfrontier Conservation Area from 2015–2022. Areas of Lion poisoning are indicated with yellow circles.

Output 3: The capacity of customs law enforcement officials is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection.

Activity 3.1: In consultation with the Customs departments of both Mozambique and South African, refine the training course and invite participants.

Progress: We consulted with the Mozambican Revenue Authority from March 2021 to September 2021 and have agreed on the topics and content to be included in the online training materials, as well as the structure and design of the course. Additionally, the Revenue Authority selected a Mozambique Legal expert to assist us with the development of Mozambique specific theory aspects of the course. This expert has already agreed to work with us and develop some of the materials. The Revenue Authority has also agreed to recommend at least 60 customs officials to participate in the training when the materials are ready, but we have not yet been given the details of these officials.

Activity 3.2: Secure expert facilitators to develop and present the online training materials.

Progress: Species and subject matter experts have been identified and secured for the following subjects and species groups: 1) introduction to wildlife trade; 2) smuggling methods for IWT; 3) relevant Mozambican and international legislation; 4) Mozambican law enforcement theory; 5) search, seizure and arrest scenarios; 6) court room procedures; 7) threatened reptiles and amphibians; 8) African lions; 9) pangolins; 10) rhino horn and ivory; 11) threatened marine species; 12) threatened bird species (including vultures, birds of prey and cranes); 13) threatened timber species; and 14) species impacted by trade in traditional medicine markets.

Activity 3.3: Arrange all logistics for the training course (catering, venue hire, etc.).

Progress: This activity is no longer required because the training will be online rather than in person. When the online materials are ready to be used, we will arrange for customs officials to gain access to the online learning management system (LMS). All materials will be available in Portuguese, either with Portuguese subtitles or as spoken Portuguese.

Activity 3.4: Refine and print training resources.

Progress: This activity is no longer required because the training will be online rather than in person. The participating customs officials will be provided with online data access to get initial access to the LMS, but they will also be able to work remotely and offline without data connection because the learning material will be downloadable from the LMS.

Activity 3.5: Conduct the 5-day training course, concluding with theoretical and practical assessments.

Progress: This activity has not yet started. We anticipate the online training starting after June 2022.

Activity 3.6 Prepare a full M&E plan for the project. Introduce the M&E component to each participant at the beginning of the training.

Progress: Not yet started, but the M&E will be managed within the LMS as the participants work through the course materials. Activity 3.6 and 3.8 will be completed simultaneously at the beginning of the training. This will be completed online before the participant starts the actual training. It will be designed as a pre-assessment evaluation of their existing knowledge, and we will collect data from each participant anonymously. It will be in the form of a questionnaire/ survey. Each participant will only begin training once we have this data.

Activity 3.7: Repeat items 3.1 to 3.6 for the three remaining training sessions.

Progress: This activity is not relevant because the 60 participating customs officials will work at their own pace.

Activity 3.8: Establish a baseline for seizures of wildlife contraband for each participant.

Progress: To be done simultaneously with Activity 3.6.

Activity 3.9: Register full details of each participant for future contact for M&E.

Progress: This will be done when the participants register for the online course.

Activity 3.10: Undertake follow-up communication with each participant monthly for 12 months to monitor uptake and effectiveness of the training

Progress: Not yet started. After participants complete their training, we will follow up with them using an anonymous M&E survey. Example questions will be: Did the training help them secure and identify species after the 12 months of doing the training? Did they find any smuggled or correctly identify species and/or hold back consignments? Did the Mozambique legal framework assist them better in implementing the law and CITES better

Output 4: Transnational crime syndicates are disrupted through targeted, well-planned investigations aided by supply chain mapping.

Freeland completed their work on this project in June 2021.

Activity 4.1 - Log verified information on locations of the consolidation points, points of departure, transit routes and the scale of quantities poached and trafficked.

Progress: Freeland, during the course of the Program gathered information and intelligence from various law enforcement agencies in Thailand, Tanzania, Mozambique and South Africa. The additional method of intelligence gathering by Freeland intelligence investigators was by conducting interviews with key stakeholders and sources by Zoom conference calls and in-person. Freeland conducted and created intelligence leads which were analysed and confirmed through the Freeland Analytical Centre of Excellence (ACE) Nuix data platform. These intelligence leads were presented to the law enforcement officials from Tanzania, Mozambique and South Africa during the Big Cats Working Group workshop held in Karingani, Mozambique during 13-15 April 2021. The attendance register is available in Annex 11.

Activity 4.2 - Assess linkages of other associated crimes.

Progress: Examples of linkages of associated crimes:

An arrest made during the project period was of a high-profile wildlife trafficking syndicate member known as Tran Kieu Trang who was arrested on 09 November 2020 at Maputo airport destined for Ho Chi Minh, Vietnam with 4.3 kilograms of rhino horn, 127 lion claws and 36 lion teeth.

During Freeland's collection and analysis of intelligence, links between a known wildlife trafficker, Simon Ernesto Valoyi who is based between Massinger, Mozambique and Phalaborwa, South Africa (known strongholds for wildlife traffickers in the GLTNP – map as below), Mozambique and a known narcotics trafficker, Mohamed Bashir Suleman located in Maputo, Mozambique was investigated by Freeland in conjunction with ANAC.

Freeland presented to participants at the BCWG workshop 13-15 April 2021 and the mapping presentation conducted on 14 June 2021 included an analysis of associated crimes both in South East Asia and Southern Africa which aiding law enforcement in their current lion parts trafficking investigations, prosecutions and identifying / investigating criminal syndicate asset forfeitures.

Activity 4.3 - Confirm data by means of analysis through Freeland and IBM / i2's Analytical Centre's of Excellence (ACE).

Progress: Freeland's partner Nuix provided their technology and expertise by providing solutions that power the fight against wildlife trafficking. The Nuix platform used during this program structured the data gathered and extracted relevant data which was shared with the law enforcement agencies during the weekly / bi-weekly conference calls, the BGWG workshop and the mapping presentation. The analysed product was shared with ANAC which Freeland used to create maps of transit routes and supply chains which was also presented at the BCWG workshop and the Mapping presentation to on 14 June 2021.

Activity 4.4 - Send analysed information to trusted LEAs for actioning or for verification purposes, at least twice per month. Open-source information confirmed and verified.

Progress: Based on Freeland's ACET intelligence report methodology an updated bi-weekly intelligence report was forwarded to ANAC and discussed with them during the weekly / bi-weekly zoom calls.

Due to the sensitive nature of the intelligence reports ANAC, during the weekly calls, expressed that the reports were discussed in detail and in person during the BCWG workshop with Freeland and their

Tanzania and South African counterparts. This was achieved and important discussions and strategies for furthering their investigations on specific cases with the inclusion of verbal agreements (managed by Lusaka Agreement Task Force) between the relevant countries in tasking and responsibilities for their continued investigations.

Activity 4.5 - Maps of transit routes and supply chains used to assist LEAs to target upper-level traffickers and aids in development of complex transnational investigation strategy.

Progress: Information and intelligence was gathered and analysed relating to consolidation points, points of departure, transit routes and the scale of quantities poached and trafficked within and associated with the Limpopo Trans-Frontier National Park. Maps related to the supply chain were created and presented to ANAC and other stakeholders on 14 June 2021 via dedicated virtual platform conference call. The detailed mapping presentation comprises of 79 PowerPoint slides.

Activity 4.6 - Add verified information to the ACE database on a bi-weekly basis. Open feedback loop with LEAs participating in information sharing sessions.

Progress: Information obtained during the weekly / bi-weekly zoom calls with ANAC and information obtained from confidential sources was verified and added to the ACET Nuix database on a bi-weekly basis for the course of Freeland's project duration.

The analysed data was provided to ANAC and law enforcement in Thailand via the Intelligence Reports.

ANAC received updated reports on a bi-weekly basis and during the weekly / bi-weekly calls. Freeland engaged and shared with trusted South African law enforcement officials during the BCWG workshop held during 13-15 April 2021.

Activity 4.7 - Send analysed information to trusted LEAs to be actioned or for verification purposes at least twice per month.

Progress: As per Activity 4.4

Activity 4.8 - Share recommendations with LEAs to provide opportunities for feedback.

Progress: During the project duration, weekly and sometimes due to availability reasons bi-weekly, calls were conducted with ANAC Mozambique. Freeland made continuous recommendations to ANAC regarding the information relating to lion parts illegal poaching and trafficking within Mozambique and the GLTFCA.

Freeland, in collaboration with Lusaka Agreement Task Force, USHSI attaché, Grace Farms Foundations financial investigation expert and Basel Governance Institute Asset forfeiture expert provided mentorship and shared recommendations during the participating countries group sharing information sessions enabling the group to prepare strategic collaborative investigations with associated responsibilities and timelines on identified lion parts traffickers and poachers within the GLTNP region.

Law enforcement agencies were provided the opportunity to give feedback during the weekly / bi-weekly calls, the face-to-face BCWG workshop and the mapping presentation held via virtual platform.

3.6 Progress towards project Outputs

Output 1. By December of Year 3, lion poaching for parts has been reduced by >80% in the Mozambican GLTP, resulting in a measurable increase in wild lion abundance and range.

In 2015, a survey by the previous lion project detected lions in 29% of the Great Limpopo Transfrontier Park and an abundance of 66.2 lions at a density of 0.99/100 km² in LNP. In 2017, through targeted poaching, this had reduced to 22.1 at a density of 0.33 lions/100 km². With the addition of camera traps provided by the Lion Recovery Fund, we will conduct another survey to calculate lion abundance and identify trends in mid-2022.

Indicator 1.1: At least 40 PPF rangers receive annual refresher training through the South African Wildlife College (SAWC) by the end of Year 3.

Progress: In March 2022, we paid the South African Wildlife College for bespoke, Advanced Ranger Training for LNP rangers. As of the time of writing (end of April 2022), 104 rangers have received training in LNP.

Indicator 1.2: Number of lion protection units (comprising of 4 members each) with capacity to prevent and detect lion poaching in the GLTP has been increased from 1 unit to 3 by the end of Year 3.

Progress: Twelve rangers are employed to monitor Lions and are managed as a single LPU with teams of three rangers.

Indicator 1.3: All members (12) of the lion protection units have the skills and knowledge necessary to prevent and detect lion poaching in the GLTP through targeted refresher training and other value-added training (e.g. SMART) by the end of year 3.

Progress: All LPU rangers have received Advanced Ranger Training as of April 2022.

Indicator 1.4: One experience exchange is undertaken with two senior Black Mambas doing on-site training with the lion protection unit members by the end of Year 2

Progress: The Black Mambas are no longer involved. We have arranged with female rangers in KNP to cross to LNP for an information exchange; however, the closure of the Giryondo Border Post has prevented this from happening. We have also approached the International Anti-Poaching Foundation regarding the possibility of some of the Akashinga Rangers participating in this information exchange. There is also a female ranger at the LNP Forward Operating Base who is from the area. We would like to hold a career day in some of the schools in the area where she can inspire young women to pursue a career in conservation. We will organise this once COVID restrictions allow.

Indicator 1.5: Job creation results in 12 households benefiting from increased basic livelihood conditions, which include education, health, household needs (such as energy and drinking water). The extent to which this will be achieved depends on existing infrastructure, which will be detailed in a project situational analysis developed by the end of Year 1.

Progress: Due to hostility toward rangers among communities in and around LNP and the fact that LPU rangers may have family members who benefit from poaching, gathering data on household income has been difficult. However, we have built trust over the last two years, so we will attempt to gather this information this year. In May/June 2022, we will be hiring a Field Assistant with funding from the Lion Recovery Fund. This person will most likely be from the area, possibly one of the rangers. This person will be much better placed to respectfully collect this personal information.

Indicator 1.6: At least 8 lion tracking collars are deployed and providing daily GPS coordinates by the end of Year 2.

Progress: We have deployed 12 collars, 11 of which are still functional. These cover five prides and three coalitions (Figures 6 & 7).

Indicator 1.7: At least one territory of a resident pride extirpated in Mozambique through poaching is naturally recolonised by dispersing animals from contiguous areas by the end Year 3

Progress: We supported SANParks to restore a pride to vacated territory in northwest KNP and to relocate a second female and subadult group to the same area.

While there is no hard data, reports from SANParks rangers and tourists, along with the locations of poison incidents, indicates that an area in the north of KNP is a high-risk area for poisoning incidents and that the Lion population in the area had decreased significantly. We identified a coalition of nine males that had colonised this area recently and collared one of them. Males are prime targets for poachers and such a large coalition operating in this high-risk area was particularly vulnerable. Once these males had been moving through the area for several months, SANParks rangers decided to relocate a pride of 6 females and 2 subadults to the area. This pride wandered between waterholes for two months before moving to Punda Maria, where the collared female was killed, reportedly by a buffalo. [REDACTED]

We are investigating why this pride chose to leave northwestern KNP where they were released.

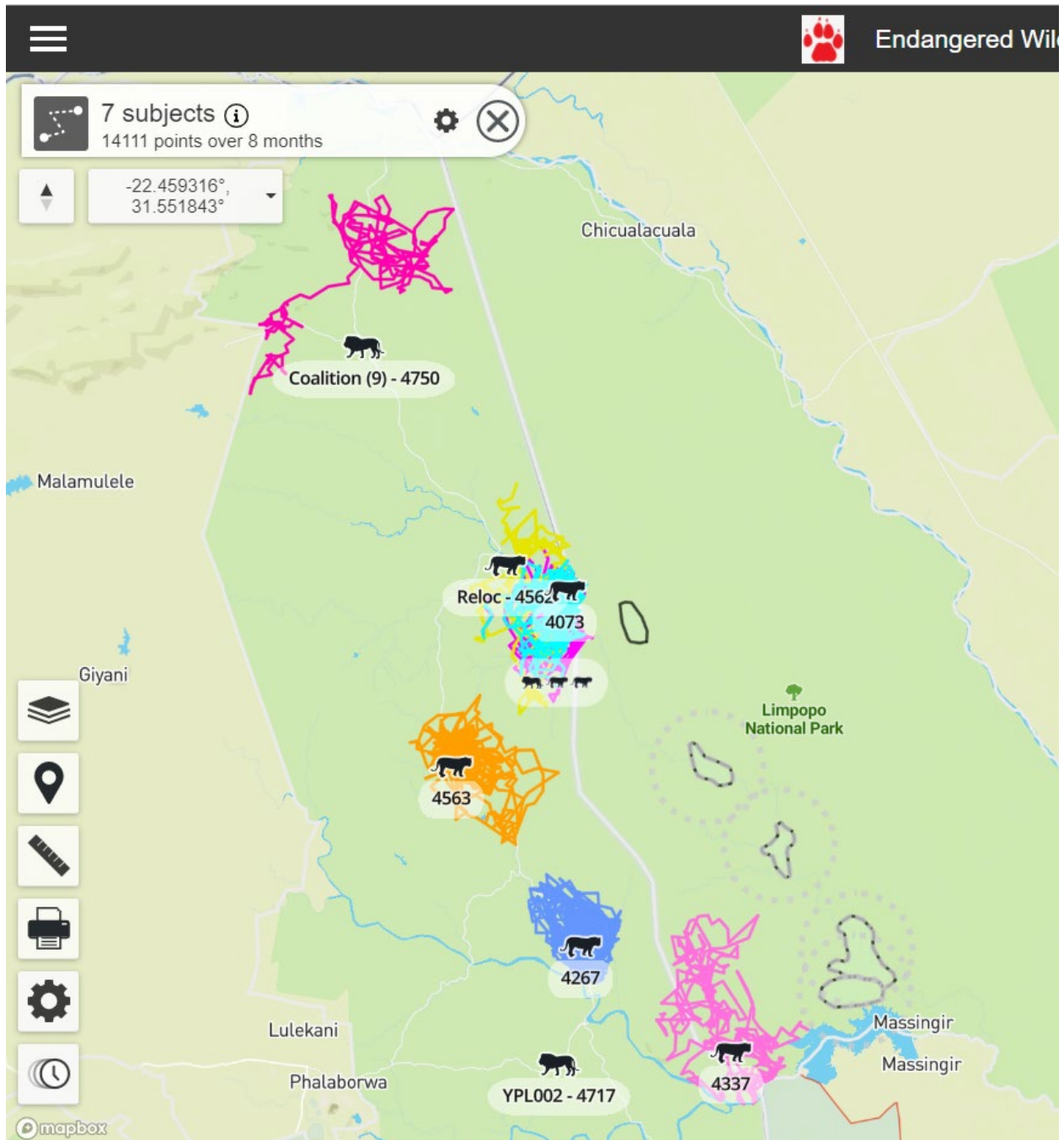


Figure 6. Collared female lions across northern Kruger and southern Limpopo National Parks.

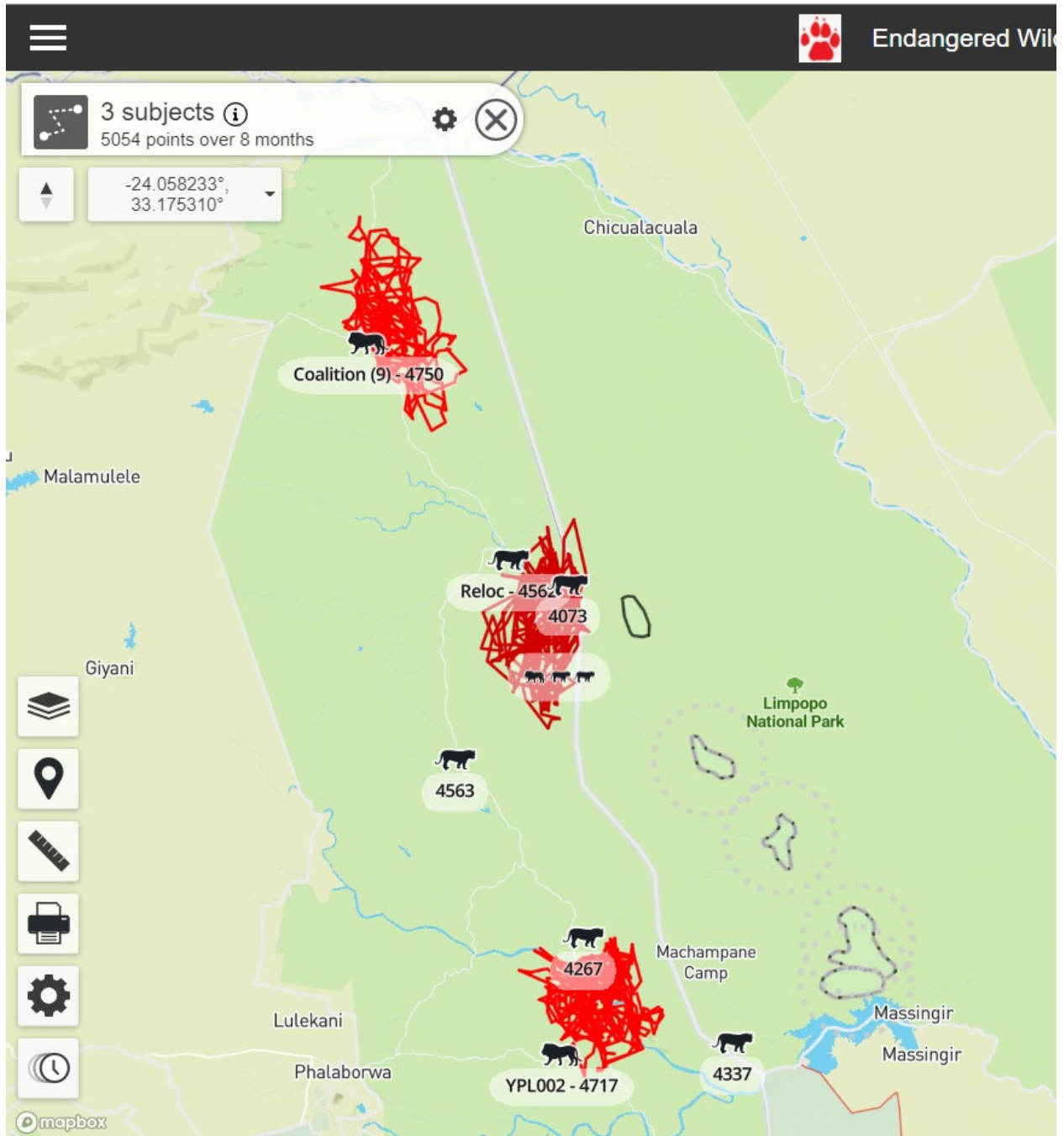


Figure 7. Collared male lions across northern Kruger and southern Limpopo National Parks.

Poisoning incidents have increased in KNP. Based on ranger data in LNP, there are very few Lions remaining in northern LNP. We need to recover the population in northern Kruger so it can be a stable source population for LNP. The Lion groups in LNP continue to consist of one to three individuals. All collared Lions, even those collared in LNP, have remained in KNP for most of the current reporting period. This may be related to low prey populations in LNP. As a result, we will be using our new camera traps to assess prey distribution and will work with MWA to collar Buffalo herds. This will give us a picture of where Lions should be and will help rangers to better identify areas that should support Lions (in addition to those that are currently important to Lions). This will allow us to deploy monitoring and patrols to areas where Lions can recolonise.

Indicator 1.8: The survival rate of collared lions increases to >60% per annum (see Q16) by the end Year 3

Progress: We have only recorded parts from one confiscated Lion, the loss of two cubs (from collar 4337-probably natural mortality), and the loss of the collared female in the relocated pride. We are currently monitoring 30 females and subadults in five prides and 13 males in three coalitions. This is slightly more than a 90% survival rate, which is certainly good for this landscape.

Output 2. The impact of poisoning on lions and other wildlife is reduced through effective proactive and reactive response strategies.

Indicator 2.1 At least 25 law enforcement officials operating in the GLTP have successfully completed one 2-day PIT course by the end of Year 1.

Progress: A total of 407 law enforcement officials have been trained in the GLTP during the project period as follows:

Date	Location	Female	Male	Total
06-10.06.2021	Limpopo National Park, Mozambique	0	44	44
12-13.06.2021	Banhine National Park, Mozambique	1	24	25
05-28.10.2021 Re-training	Kruger National Park, South Africa	42	228	270
09-10.10.2021	Zinave National Park, Mozambique	0	20	20
19-26.01.2022	Gonarezhou National Park, Zimbabwe	4	54	58
		47	369	407

Indicator 2.2 At least one poison reaction kit and aide memoire per trainee distributed at the end of each training intervention to provide additional support post training by the end of Year 1.

Progress: The following poisoning kits were sourced and distributed to ranger sections in the areas where training was completed:

Location	Wildlife Poisoning Response Kits	Wildlife Poisoning Aide Memoires issued
Limpopo National Park, Mozambique	6	44 (Portuguese)

Banhine National Park	4	25 (Portuguese)
Kruger National Park	56	27
Zinave National Park	4	20
Gonarezhou National Park	6	60
	76	176

- Wildlife Poisoning Response Kits are not issued to individual learners, but rather to ranger section/pickets and issue and replenishment is managed by the relevant area manager/section ranger.
- The Kruger National Park preferred to only have aide memoires issued to section rangers, sergeants, and corporals in each section rather than to every learner who participated in training, hence the lower number of these issued there.

Indicator 2.3 A Poison Response Strategy (PRS) which facilitates rapid response and effective management of poisoning events involving all relevant role-players has been drafted by the end of Year 1.

Progress: Following discussions with stakeholders, we workshopped the drafting of a Wildlife Poisoning Response Strategy for each of the areas with learners and management staff during the presentation of training at each project site. The drafting and implementation of plans remained the responsibility of park management in each of the project areas. The Kruger National Park has circulated their strategy internally for comment and is awaiting sign-off from SANParks management.

Indicator 2.4 Stakeholder approval for the draft PRS is secured by the end of Year 2.

Progress: In process, but delayed due to Covid restrictions and administrative processes that limited engagement in this regard.

Indicator 2.5 Within one year of approval, the PRS has been implemented for at least one poisoning incident.

Progress: There were 10 poisoning incidents in the GLTFCA during 2021 and the lower mortalities depicted in Figure 5 support the fact that, due to better preparedness and training, response to such incidents have improved resulting in fewer mortalities during such events.

Indicator 2.6 Establish baseline poisoning mortality for the border region between Kruger NP and Limpopo NP and compare this to established recent baselines from adjacent areas in Limpopo NP by the end of Year 1. Reduce poisoning mortality by 60% against these baselines by the end of Year 3.

Progress: Data on known incidents have been captured on the African Wildlife Poisoning database and figures 4 and 5 reflects the number of incidents and mortalities experienced in the project area since 2015 to the present. Based on this data, the number of poisoning incidents in 2021 have reduced by almost 40% from 2020 while wildlife poisoning mortalities have reduced by 76% between 2020 and 2021.

Output 3. The capacity of customs law enforcement officials is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection.

Indicator 3.1. At least 60 customs officials from Mozambique and the Mozambique/South Africa border (~80% are to be Mozambicans) attend one of four FSITP by the end of Year 2.

Progress: This has not started yet. As described in the section on progress towards carrying out project activities above, we are making good progress towards developing the online training materials, while the Mozambique Revenue Authority have agreed to identify 60 customs officials to participate in the training. The training will only start when the materials are developed and ready to be used on the Learning Management System (LMS), so this output will only be measurable when the training has started.

Indicator 3.2. 50% of the participants can provide a list of at least two law enforcement officials that the participant has trained using the train-the-trainer approach by the end of Year 3.

Progress: Not yet started – will only start after training has been completed.

Indicator 3.3. At least a 10% increase in seizures of wildlife contraband across the GLTP is recorded against baseline historical seizure data by the end of Year 3.

Progress: Not yet started – will only start after training has been completed.

Output 4 - Transnational crime syndicates are disrupted through targeted, well-planned investigations aided by supply chain mapping.

Indicator 4.1 Law enforcement agencies (LEAs) use the information and analysis of supply chain mapping to identify at least one international trafficking syndicate and be in a position to arrest at least three high-level traffickers for use in prosecution by the end of Year 3;

Progress: Completed. During Freeland's collection and analysis of intelligence, links between a known wildlife trafficker, Simon Ernesto Valoyi, who is based between Massinger, Mozambique, and Phalaborwa, South Africa (known strongholds for wildlife traffickers) and a known narcotics trafficker, Mohamed Bashir Suleman, located in Maputo, Mozambique, were investigated by Freeland in conjunction with ANAC.

Indicator 4.2 LEAs use the information from the analysis of the supply chain to identify and seize assets from at least three high-level traffickers by the end of Year 3;

Progress: Partially completed. As outlined in the annual report for Y2, Tran Kieu Trang was arrested at Maputo International Airport during the project period, Freeland was instrumental in the arrest of Boonchai Bach and seizure of \$11 million in assets. They have been working closely with ANAC to facilitate cross-border investigations and to map supply chains and identify syndicate members.

Indicator 4.3 LEA investigators collaborate and plan at least one cross continental joint investigation with common aims/goals using information from 'mapping the supply chain' by the end of Year 3

Progress: Completed. During the BCWG workshop, specific high profile, wildlife criminal cases and syndicate members were discussed by Lusaka Agreement Task Force (LATF), South African, and Mozambique authorities. Three well-planned collaborative cross border investigative strategies were formulated with critical information and intelligence shared by the BCWG. Tasks and responsibilities for South African and Mozambique law enforcement were agreed and a memorandum was drafted by Lusaka Agreement Task Force and submitted to the BCWG members.

On 14 June, Freeland delivered a detailed mapping presentation comprised of 79 PowerPoint slides to ANAC and Mozambican law enforcement. This summarised the intelligence, trade routes, and linkages discovered during their work on this project. Freeland's involvement is now complete. They will continue to work with Mozambican law enforcement authorities and ANAC in their own capacity.

3.7 Progress towards the project Outcome

Outcome: Mozambique and the Greater Limpopo Transfrontier Park (GLTP) have improved capacity to detect and prevent illegal killing of lions and trade in their parts across the entire trade chain, from poaching to international trafficking.

Indicator 1: The number of newly established lion protection units is increased by 2 in the GLTP

The Lion Protection Unit is managed as a single unit with four teams of three, for a total of 12 rangers. Additionally, all APUs have been trained to detect and report Lion sign. As of April 2022, 104 rangers, including the LPU, have received Advanced Ranger Training. The indicator is appropriate and LNP capacity has increased more than projected.

Indicator 2: At least 25 law enforcement officials have skills and resources to respond to poisoning in the GLTP

This reporting year, we have trained 69 rangers in LNP and an additional 117 rangers across the other parts of the GLTP. Additionally, we trained over 450 rangers in Year 2. The indicator is appropriate and we have therefore more than achieved this goal.

Indicator 3: At least 60 customs officials on the border between South Africa and Mozambique have the skills to detect the smuggling of lion parts into and out of Mozambique

Customs officials will be trained in Year 4 through an online learning platform that is currently being developed. We expect to reach more than 60 officials. The indicator is appropriate, and we should exceed the goal.

Indicator 4: At least one international trafficking syndicate, operating in or through Mozambique is disrupted through the seizure of its assets, and the potential arrest of at least three of its members.

Facilitated by Freeland and conducted by Thailand's anti-money laundering authorities, a March 12, 2021 operation targeting Boonchai Bach, who is also a Thai citizen, was conducted whereby 330 million-baht (\$11 million) worth of assets were seized from the trafficker. The syndicate is responsible for having trafficked thousands of tonnes of ivory, rhino horn, lion parts and other endangered species from Africa to Vietnam, Thailand and China. No further arrests were made during Freeland's participation in this project in this financial year (Y3Q1). Since only one member was arrested, this indicator was not achieved. However, there are several more syndicates that are under investigation by Mozambican and SE Asian Law Enforcement Agencies and Freeland. Though their involvement in this project has ended, the work to disrupt syndicates and arrest their members continues.

3.8 Monitoring of assumptions

Outcome: Mozambique and the Greater Limpopo Transfrontier Park (GLTP) have improved capacity to detect and prevent illegal killing of lions and trade in their parts across the entire trade chain, from poaching to international trafficking.

Assumption 1: Data for the project closure report can be collected

Comments: With the addition of camera traps provided by the Lion Recovery Fund, we will be able to collect Lion distribution data from across LNP.

Assumption 2: Trained individuals remain employed

Comments: Training has just taken place in April 2022. We expect all training recipients to remain employed.

Output 1. By December of Year 3, lion poaching for parts has been reduced by >80% in the Mozambican GLTP, resulting in a measurable increase in wild lion abundance and range:

Assumption 1: Government remains committed to supporting and permitting anti-poaching work in wildlife areas

Comments: Both governments are still highly supportive of the projects. As poisoning becomes a greater threat, we expect them to continue to support the project.

Assumption 2: Wildlife authority can support additional APU teams in situ and able to provide an armed ranger for all patrols

Comments: Peace Parks continues to support all APU teams. They will continue to employ them and are raising funds to hire more rangers.

Assumption 3: Positions for enrolment in the relevant courses are available at the SAWC

Comments: A SAWC trainer went to LNP to provide on-site training, so availability of places at the college itself was not relevant.

Assumption 4: Female community members are interested in signing up to be APU members and can travel for training purposes

Comments: We have not yet engaged with female community members. This will happen in one or more of three ways: 1) female rangers from the LNP APU team will engage with students through school visits in the area, 2) female rangers from KNP will travel to Mozambique to hold a single information sharing and educational session, 3) the Akashinga Rangers from Zimbabwe will travel to Mozambique to host an information sharing and educational session.

Assumption 5: Wildlife authority can support the independent teams in situ and provide an armed ranger for all patrols

Comments: See Assumption 2

Assumption 6: Rangers remain satisfied with their employment, adhere to the code of conduct, and remain with the project

Comments: LPU rangers continue to be interested in working with the Lion Field Officer. They have enthusiastically learned additional skills, including how to use VHF equipment, chase Lions away from livestock areas, and set up and manage camera traps. We expect them to remain with the project.

Assumption 7: Reporting and communication lines work effectively.

Comments: Reporting and communication is even more effective with the new PPF leadership team in LNP.

Assumption 8: A high number of snares and poison incidents can be detected and suspects can be apprehended with support of law enforcement officials

Comments: During the reporting period, 601 snares and 27 gin traps were detected, two firearms confiscated, and 25 suspects arrested. This assumption remains valid. Graphs depicting APU activities are available in Annex 12.

Assumption 9: An increase in patrol efforts will lead to a decrease in poaching activities

Comments: Fewer snares were removed (601 in Y3 vs 2,236 in Y2) and more arrests were made (25 in Y3 vs 9 in Y2). It is too early to determine whether this has led to a reduction in poaching, but the results could be considered promising. The assumption still holds.

Assumption 10: Prides in vulnerable areas can be located and caught for fitting of collars

Comments: This is proving to be only partly true. While we have collared 12 Lions, the remaining small groups in LNP are highly skittish and do not come to bait or callups. We have strategically deployed our new camera traps to provide more information on Lion movement and direct our collaring efforts going forward.

Assumption 11: Number of new study animals recorded in Limpopo NP will increase as potential Lion source populations in Kruger NP and areas where Lions were extirpated are secured from poaching

Comments: This assumption is key to the stated Outcome and remains valid; however, due to the poisoning incidents in KNP and resulting decrease in the Lion population in the north, it may take longer than the project period for the population to recover enough for prides of three or more females to permanently reside in LNP.

Assumption 12: Livelihood information can be obtained from the new APU members

Comments: Due to high conflict between park management and communities in and around the park and the fact that APU's family members may be engaging in poaching, this has been difficult. The Lion Recovery Fund has provided funding for a field assistant in LNP, who will be from the area. As a Mozambican, this person will start with a higher level of trust than we have had up to now.

Output 2. The impact of poisoning on lions and other wildlife is reduced through effective proactive and reactive response strategies.

Assumption 1: Law enforcement officials are made available and mandated to attend the training

Comments: We have successfully completed training with 407 learners working in law enforcement with the project area.

Assumption 2: Law enforcement officials respond to incidents

Comments: Efficient and rapid response is essential and, based on the reduced mortalities per incident recorded in 2021/22, it seems as if this approach is yielding dividends.

Assumption 3: Key stakeholders are motivated and mandated to develop a response plan

Comments: This assumption still stands, but there has been mixed response to this from the various project sites with some response plans awaiting sign-off while others need to be completed and submitted for sign-off.

Assumption 4: Required official sign off can be obtained

Comments: See above. No response plans have been officially signed off as yet.

Assumption 5: Poisoning incident occurs after the PRS is finalised

Comments: This assumption is still valid and incidents are likely to continue occurring, but with far less impact than previously.

Assumption 6: Most poisoning incidents are able to be located and recorded

Comments: This assumption holds and is critical. We have established improved communication networks with the management of the respective areas and most, if not all, known poisoning incidents are now captured on the database.

Assumption 7: Social will is in place to implement the response strategies

Comments: This assumption is important, but requires greater engagement and awareness action with communities through the relevant staff and structures in the respective project areas.

Output 3. The capacity of customs law enforcement officials is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection.

Assumption 1: Enforcement officials are available and willing to participate in the training intervention

Comments: This assumption still holds and is critical. Because we have worked closely with the Mozambican Revenue Authority during the preparation of the online training and because they have indicated support for the training at the highest level, we anticipate that the Authority will encourage customs officials to participate. Individual willingness and engagement cannot be guaranteed, but we can increase the chances of full engagement by making the content interesting and engaging.

Assumption 2: Trafficking of lion parts is done through official ports

Comments: This assumption still holds. While we do not know what proportion of illegal wildlife products, including lion bones, goes through official ports, we know for certain that some illegal wildlife products do go through these ports. The training includes multiple threatened species, in addition to lions, and we know that many of these species are smuggled through official ports.

Assumption 3: Mozambican authorities assign appropriate officials to the training course and who are in a position to detect and enforce any lion trafficking through ports.

Comments: This assumption still holds. As for assumption 1, because we have worked closely with the Mozambican Revenue Authority during the preparation of the online training and because they have indicated support for the training at the highest level, and because we discussed who should participate in the training, we anticipate that the Authority will assign appropriate officials to the training course.

Output 4 - Transnational crime syndicates are disrupted through targeted, well-planned investigations aided by supply chain mapping.

This portion of the project was completed in Y3Q1.

Assumption 1: Parties remain committed to the London Declaration and Kasane Statement throughout life of project

Comments: This assumption remained largely valid throughout this portion of the project with the following caveat: We observe that police and AML agencies could use more reach out by UK diplomats regarding the London declaration. Most diplomatic reach out appears focused on MoNRE and forestry agencies. The CITES authorities are aware of the London declaration and Kasane Statement but the police, FIU and other agencies do not seem as aware, but they are keen.

Assumption 2: LEA officers are committed to a zero-tolerance policy on corruption and able to conduct longer-term investigations into transnational counter-wildlife trafficking

Comments: LEAs were carefully selected for engagement. No evidence of corruption was detected.

Assumption 3: LEAs have baseline training and experience in working with other agencies to counter transnational organised crime cases

Comments: LEAs had baseline of experience and gained more experience through the Big Cat Investigation Working Group.

3.9 Impact: achievement of positive impact on illegal wildlife trade and poverty reduction

Project Impact: A significant reduction in the targeted poaching of wild lions for their parts in the Mozambican component of the GLTP.

We continue to work with LNP and KNP security teams to identify hotspots for Lion poaching. The parts of only one Lion have been discovered in this financial year. We are aware that this is possibly because Lion occupancy is extremely low in LNP, so poachers have moved to KNP. This is supported by the fact that one poacher that was arrested in KNP was from Mozambique, but set up his Lion bait near the border fence within KNP.

While we have identified one location in LNP and a region in KNP, we have not yet assessed poaching prevalence across the greater area of LNP. With the addition of camera traps, we will be able to assess occupancy and gather information on demographics across LNP, allowing us to deduce whether the impacts of poaching have decreased or not. This will be indicated by occupancy rate (the number of camera sites where Lions are detected) and mean pride size (a pride of three or more females is considered healthy).

This project directly addresses the threat that poaching poses to lions in the GLTP through direct mitigation increasing anti-poaching action. Additionally, this project directly addresses the threat of illegal supply chains to lions by researching and understanding the illegal supply chain of lion projects. This will enable recommendations to be made on where action can be taken to best disrupt or break this supply chain.

On 14 June, Freeland delivered a detailed mapping presentation comprised of 79 PowerPoint slides to ANAC and Mozambican law enforcement. This summarised the intelligence, trade routes, and linkages discovered during their work on this project. Freeland's involvement is now complete. They will continue to work with Mozambican law enforcement authorities and ANAC in their own capacity.

4. Thematic focus

Output 1: We are strengthening law enforcement by providing Advanced Ranger Training, with some additional bespoke components, for 104 rangers in LNP. This will improve their ability to detect and arrest poachers and reduce the threat to Lions in this landscape.

Output 2: We are capacitating rangers to respond safely and effectively to poison incidents. This ensures they collect and protect critical evidence to support prosecutions, reduce the impact of poison on the ecosystem, and to do so safely to prevent injury to themselves.

Output 3: Critical role-players in the prevention of wildlife trafficking are customs officials who act as the last line of defence in stopping illegal wildlife products crossing international boundaries. In addition to the need for suitable laws that empower customs officials to seize illegal wildlife products, the officials

themselves need to understand the importance of preventing IWT, they need to have knowledge of the laws that apply to wildlife (e.g., CITES), and they need to be able to identify wildlife species that are protected by these laws. The online training being developed under Output 3 will provide this knowledge and should increase the capacity of Mozambican customs officials to prevent trafficking of wildlife products out of the country.

Output 4: Freeland has trained LEAs in Mozambique and SE Asia to map trade routes between the two regions. This culminated in a Big Cat Working Group meeting in April 2021, which brought together law enforcement officials and anti-poaching specialists from Tanzania, Mozambique, South Africa. On 14 June, Freeland delivered a detailed mapping presentation comprised of 79 PowerPoint slides to ANAC and Mozambican law enforcement. This summarised the intelligence, trade routes, and linkages discovered during their work on this project. Freeland's involvement is now complete. They will continue to work with Mozambican law enforcement authorities and ANAC in their own capacity.

5. Impact on species in focus

The species in focus in this project include the following:

African Lion <i>Panthera leo</i>	Leopard <i>Panthera pardus</i>
African Wild Dog <i>Lycaon pictus</i>	Cheetah <i>Acinonyx jubatus</i>
White rhinoceros <i>Ceratotherium simum</i>	Elephant <i>Loxodonta africana</i>
Lappet-faced Vulture <i>Torgon tracheliotus</i>	White-headed Vulture <i>Trigonoceps occipitalis</i>
Hooded Vulture <i>Necrosyrtes monachus</i>	Cape Vulture <i>Gyps coprotheres</i>
African White-backed Vulture <i>Gyps africanus</i>	Pangolin <i>Smutsia temminckii</i>

We continue to monitor Lion prides and coalitions in southern LNP and northern KNP. We have deployed 11 collars (Indicator 1.6) on five prides and three male coalitions. It has become clear that poisoning has moved into KNP. During this financial year, all Lions collared in LNP shifted their activity almost entirely to KNP. This may be related to prey availability. With the deployment of our camera traps in Feb 2022, we hope to gather more information regarding prey distribution. This will tell us where to look for recolonising prides in LNP (Indicator 1.7). Across our monitored prides and coalitions, we have lost two subadult Lions (probably due to natural causes), and one possibly due to buffalo injury or possible poaching. While this definitely > 60% survival rate for the year (Indicator 1.8). This does not include all Lions across the study area. Our camera traps will provide more information on Lion occupancy and survival across LNP throughout Year 4.

While lions are the focus of the patrol optimisation, vultures and a suite of other illegally trafficked species are included in the anti-poaching unit training, poison response training, and customs official workshops.

More than 500 threatened vultures of five species have been poisoned in the project area since 2015. The species of vulture that has been the most severely affected is the critically endangered African White-backed Vulture that is much more vulnerable to poisoning due to the species congregating at carcasses in much larger numbers than other species, feeding first and consuming most of the carcasses before other species start to feed. More than 95% of the vultures killed by poisoning in the GLTFCFA belong to this species. In addition to vultures, other avian scavengers such as the endangered Bateleur and Tawny Eagle were also killed during some of the incidents, but in much smaller numbers due to their territorial nature and lower density of occurrence.

Additionally, the EWT's Birds of Prey Programme is launching their Eye in the Sky project during 2022 in KNP and, hopefully soon thereafter, in LNP. This project uses vultures with high resolution tracking devices to alert rangers to large kills and possible poisoning events. This is a critical tool in our fight against poaching.

6. Project support to poverty reduction

Output 1. By December of Year 3, lion poaching for parts has been reduced by >80% in the Mozambican GLTP, resulting in a measurable increase in wild lion abundance and range.

PPF continues to employ the 12 rangers of the LPU. These rangers can therefore continue to support themselves and their families. This job security is particularly important during this time when COVID-19 has increased unemployment on a global scale. Additionally, 104 rangers in LNP have received Advanced Ranger Training, which increases their employability, further securing their employment.

Output 2. The impact of poisoning on lions and other wildlife is reduced through effective proactive and reactive response strategies.

Training in poison response also increases the skill set of rangers, further securing their employment.

Output 3. The capacity of customs law enforcement officials is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection.

The online training under development will be provided to at least 60 customs officials working for the Mozambican Revenue Authority, and we hope there will be a knock-on effect for skills development and capacity building. These are direct effects for Mozambique, a low-income country. Indirect effects on poverty should occur through the reduction in wildlife trafficking, which is intended to lead to reduced poaching. Reduced poaching leads to increased opportunity for growth in wildlife populations, which leads to greater opportunities for natural resource use by rural populations.

Output 4. Transnational crime syndicates are disrupted through targeted, well-planned investigations aided by supply chain mapping.

The training provided to Mozambican LEAs and ANAC officials will increase their ability to identify, arrest, and prosecute members of poaching syndicates. The reduction of wildlife crime in local communities will reduce associated crime and violence, allowing for more stable and profitable small businesses and other income generating ventures. Stable, safe communities near protected areas such as LNP could support profitable community-based tourism operations.

7. Consideration of gender equality issues

Output 1. By December of Year 3, lion poaching for parts has been reduced by >80% in the Mozambican GLTP, resulting in a measurable increase in wild lion abundance and range.

Currently, the LPU is comprised of rangers previously employed by Panthera and rangers newly added to the unit from general APU duties. Once COVID-19 regulations allow us to gather, we will set up a community engagement event to encourage women and girls from communities around the park to become rangers. We will then be able to train and hire female rangers to add to the LPU and general APU. One of the APU team leaders is a woman and is very respected in her position. She will be an excellent mentor to incoming female rangers. Our aim is to maximise employment, anti-poaching coverage, and to drive the inclusion of women into local anti-poaching activities within LNP. Priority will be given as far as possible to female candidates for the LPU, these women will receive the same training, salaries, and incentives as their male counterparts. Women are often marginalised in local communities and thus by employing women, and working with female rangers, they can strengthen their position in their communities and become role models to other women who may not have considered a career in conservation.

Output 2. The impact of poisoning on lions and other wildlife is reduced through effective proactive and reactive response strategies.

Twelve female LNP rangers and park staff received PIT training. 47 women across the GLTFCA received training.

Output 3. The capacity of customs law enforcement officials is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection.

With regard to the development of the training materials in South Africa and Mozambique, the EWT employed a female training coordinator to work with species and subject matter experts. Among the experts, five out of 10 contracted by the EWT are females. In terms of the Mozambican customs officials who will be trained, it is not within our control to dictate who gets nominated for training, but we will encourage the Mozambican Revenue Authority to include female customs officers. We will monitor ratios of male and female participants through the learning management system, but this has not yet been set up and the training has not yet been conducted.

Output 4. Transnational crime syndicates are disrupted through targeted, well-planned investigations aided by supply chain mapping.

Freeland's employee ratio is currently at 45% women and 55% men. Where possible, liaison and engagement with women enforcement officials will be conducted. A woman was hired as a technical consultant and is being trained for collection of intelligence from participants and for further liaison with enforcement agencies. Another woman was hired in Year 2 by Freeland as a Financial Officer.

8. Monitoring and evaluation

Outcome: Mozambique and the Greater Limpopo Transfrontier Park (GLTP) have improved capacity to detect and prevent illegal killing of lions and trade in their parts across the entire trade chain, from poaching to international trafficking.

Output 1. By December of Year 3, lion poaching for parts has been reduced by >80% in the Mozambican GLTP, resulting in a measurable increase in wild lion abundance and range.

We monitor Lion movement and provide live locations to all senior security personnel in KNP and LNP. This allows them to actively deploy rangers to check on collared prides. From the Park Security Team, we obtain Lion detection information from APU and LPU patrols. This allows us to monitor Lion presence across LNP. They also share with us the number of snares and gin traps removed, firearms confiscated, suspects arrested and prosecuted, as well as other metrics related to APU patrols. This allows us to track effort vs impact on poaching in general.

The LNP Park Security Team has maintained a register of all 104 rangers that received Advanced Ranger Training. This training directly speaks to the project outcome.

Output 2: The impact of poisoning on lions and other wildlife is reduced through effective proactive and reactive response strategies.

We have provided Poison Intervention Training to 69 rangers in LNP and Banhine NP, as well as 349 rangers across the rest of the GLTFCA. This speaks directly to improving capacity of rangers to prevent the death of Lions during poaching incidents. The indicators we track are the number of people trained and the number of poison incidents successfully neutralised. No poison incidents have been detected in LNP during this financial year. One poison incident was detected on the border between KNP and LNP and the poacher was arrested. SANParks continues to communicate poison incidents to us. These are recorded by the EWT Conservation Planning and Science Unit in our poison database, which is stored on a PostGIS online server.

Output 3. The capacity of customs law enforcement officials is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection.

The Outcome that is relevant to Output 3 is that Mozambique will have improved capacity to detect and prevent illegal trade in lion parts across its international borders. This will be achieved through greater knowledge and capacity among customs officials. The first indicator for Output 3 will be that at least 60 customs officials from Mozambique participate in online training. This is changed from the original indicator which included training of some South African customs at the Mozambican border. We will not be training South African customs. The training has not yet started, but the numbers of participants and the pass rates will be measured through built-in monitoring on the Learning Management System (LMS). Using the LMS, the EWT training coordinator will follow up with the participants after the training to see how they are implementing their new knowledge in their work, whether they are passing it on to their

colleagues (which relates to the second indicator of trainees passing on their knowledge to other customs officials), and whether it has helped them detect more illegal products (which relates to the third indicator of a 10% increase in seizures). An increase in seizures will be the real proof of whether the training has been effective. Questions that customs officials will answer before starting the training, with follow up questions after the training should provide data to determine whether seizures increase in number.

Output 4. Transnational crime syndicates are disrupted through targeted, well-planned investigations aided by supply chain mapping.

The final output of mapping the trade routes with ANAC and LEAs in SE Asia has been completed. This information is highly sensitive and confidential. For more information, please contact Sean O'Regan (sean@firmafrica.org). The transnational BCWG continues to operate across Mozambique, South Africa, and Thailand. The training and mentorship provided by Freeland to LEAs in Mozambique and SE Asia directly contributes to the project Outcome of improving capacity to prevent illegal killing of Lions related to international trafficking.

There have been no changes to the M&E plan over the reporting period.

9. Lessons learnt

Output 1. By December of Year 3, lion poaching for parts has been reduced by >80% in the Mozambican GLTP, resulting in a measurable increase in wild lion abundance and range.

Lions in LNP are highly skittish and live in small groups of one or two individuals. This is most likely a result of historical poaching. We have collared the three Lions that responded to callups. The rest only respond once the vehicle (and vet) have left the area. Attempts to dart from tree hides have also failed. We have realised that we need to alter our strategy. We will do three things:

1. Recolonisation is based partly on prey availability. We will work with MWA and PPF to collar buffalo herds. This will help us to identify areas that should have Lions.
2. Small groups of Lions are not able to recolonise areas dominated by Spotted Hyenas. Additionally, Spotted Hyenas are the primary species involved in human-wildlife conflict. We will collar hyenas to identify den locations and areas of high-density where Lions may not be able to successfully recolonise.
3. We will use our new camera traps to identify occupancy of Lions, Spotted Hyenas, and prey across LNP.

Together, these strategies will allow us to paint a picture of Lion recovery potential across LNP.

If we were to start the project today, we would follow this strategy from the beginning.

Output 2: The impact of poisoning on lions and other wildlife is reduced through effective proactive and reactive response strategies.

Poison Response Training curriculum is well established. It has been successfully deployed across Africa and in Cambodia. It is effective and accessible to people from all educational levels. While the curriculum is updated based on new information, there is currently no need to improve on it.

Continued communication and support of staff in the project areas post-training is essential to ensure uptake and implementation of the poisoning response plans and associated activities.

Drafting and adoption of formal poison response plans have been a challenge exacerbated by Covid-restrictions and other challenges and it is essential that these should be finalised and implemented.

Output 3. The capacity of customs law enforcement officials is enhanced through targeted training, enabling them to combat illegal trade in lion products through enhanced detection.

We are currently developing the training materials for use in the online training for Mozambique customs officials so do not yet have a lot to report on in terms of lessons learnt. Having developed other training courses in the recent past, we have learnt from previous projects and feel that we have a good approach

with using external species and subject matter experts. However, the use of a learning management system is new to us. We went through a careful selection process when choosing the system, so hope to have a smooth transition to online training, but also anticipate glitches, and we will have to report on these in our final report. From previous experience working with government departments, we are familiar with the long time it can take to get permission to work with them, and our current experience has been similar, but one of the most important aspects of working with governments, especially foreign governments (in our case, the Mozambique Revenue Authority), is that you start communicating with them early in the project to give them sufficient time to process everything. It is also important to ensure that they are involved in the process of developing of the project and have direct inputs to it rather than dictating to them what you want to do.

10. Actions taken in response to previous reviews (if applicable)

- 1. Would it be possible to provide more illustration/ evidence of the activities relating to Freeland? Obviously much of the work is sensitive and confidential but it would be interesting to have more details of the work and of how Freeland's work dovetails with the rest of the project.*

The connection between Freeland and the rest of the project relates to the fact that the primary source of Lion parts has been the GLTFCA in the south and Niassa in the north. Massingir village, at the entrance to LNP, is a known hub for poaching run by organised crime networks. Freeland investigated a known poacher, Simon Ernesto Valoyi, from Massingir. More information can be obtained in confidence from Sean O'Regan at sean@firmafrica.org.

- 2. It would be helpful if the reporting on outputs used the output indicators in the narrative*

We have endeavoured to link all reporting to output indicators throughout this narrative.

- 3. Might the planned training for customs officials have to be carried out at alternative venues?*

Customs training will now be conducted through an online platform, which will allow training of agents at many more ports than the original four ports outlined in the original proposal.

- 4. The request that £8,986.01 be reallocated from the Travel and Subsistence budget against Activity 1.2 (mentioned at Section 16, AR2) needs to be submitted (and justified) in a Change Request*

This Change Request has been submitted and approved.

- 5. The application listed Panthera as a partner. They have not been mentioned in the two Annual Reports to date: what happened to them?*

Panthera decided to end its operations in LNP before this project began. The EWT took over the role of Panthera.

11. Other comments on progress not covered elsewhere

We are in the process of revising our strategy to understand Lion occupancy, demographics, and recovery. This has become necessary because targeted poaching has made the Lions in LNP incredibly wary. We are working with MWA and PPF to understand the movements of Buffalo, an important Lion prey item, and of Spotted Hyenas, which may exclude small groups of Lions. The addition of camera traps to our set of tools will greatly improve our ability to monitor Lion occupancy and recovery.

The project has good support in Mozambique and South Africa. The main risk to the project is the large area of poisoning and poaching impact. We depend on the consistent cooperation of ranger teams across the area to keep track of Lions and to respond to Lions that may be dead (such as when we receive mortality alerts) or are in high-risk areas. The rangers are also stretched extremely thin. However, the rangers see the collared Lions as an asset and respond as quickly as they are able, with head rangers sometimes checking on Lions themselves when field rangers are out on patrol.

12. Sustainability and legacy

We have engaged with a variety of important players in Mozambique lion conservation, including the Mozambique Wildlife Alliance, the Gorongosa Project, Karingani, ANAC, and Eduardo Mondlane University. All lion conservation actors in Mozambique are fully aware of our work. Mozambique is going to establish a lion forum to share conservation lessons and we have been invited to participate.

In addition to our plans to work with Prof Valerio Machandza to provide opportunities for Mozambican students to pursue advanced degrees, we are participating in a National Geographic STEM Mentorship programme. Our National Geographic Explorers, Vincent van der Merwe and Kulani Nyakane, will be mentoring an early career Mozambican conservationist. He will gain experience in Cheetah, Wild Dog, and Lion conservation in Mozambique and South Africa. This is our first step toward building capacity in Mozambique that will ensure the sustainability of our conservation work in LNP.

Due to security concerns, only Senior security personnel have direct, real time access to Lion locations. The data is available for students to use and will be part of our training activities in Mozambique.

Training and upskilling of field rangers in LNP, including the LPU, will make them more effective in their efforts to reduce poaching in LNP and will increase their employment potential for the rest of their life. PPF took over employment of the LPU when Panthera left the project area and their skills will always be in demand. They will be able to support their families and inspire children and young people within their communities to follow them in their conservation career.

Training for customs officials in Mozambique was styled as “train the trainer,” which supports sustainability as the participants in our course are encouraged and expected to share their knowledge with others. However, COVID has required us to create an online training course to provide this training. The new online format will allow us to train many more customs officials in Mozambique than originally planned and to train officials in other African countries as well. This extends the reach of our training and ensures the ongoing impact of the project.

Freeland’s contribution to the development of the Big Cat Investigation Group, should continue with external funding (from USAID (US Agency for International Development) and others) and allow for the sustainability of shared information on big cat seizures and law enforcement activities in this regard. Ongoing application of skills obtained and lessons learned, coupled with the network created between LEAs in Mozambique, South Africa, and Southeast Asia ensures the sustainability of this project’s impact on mapping international wildlife trafficking networks and disrupting IWT syndicates. There is awareness within law enforcement agencies and others of the role of the IWT project in supporting action on data collection and sharing on the supply chain for lion parts.

We are establishing a footprint in southern Mozambique as carnivore conservation experts. We have a carnivore guild restoration project in Zinave National Park, and have assisted with reintroductions of Cheetahs to the Zambezi Delta, Maputo National Park, and Karingani Game Reserve and reintroductions of Wild Dogs to Gorongosa National Park and Karingani Game Reserve. We are working with partners, including Eduardo Mondlane University, National Geographic, MWA and other conservation projects to identify, train, and support carnivore conservationists within Mozambique. This will ensure the legacy of our work across the GLTFCA.

Targeted poaching is an ongoing threat requiring ongoing intervention and monitoring of priority species. Our exit strategy extends beyond the end of this grant. We will only move on from LNP once a Mozambican conservationist is fully capacitated to carry on the necessary work. Since our work in Zinave, where we will actively train students from Eduardo Mondlane University, is only just beginning, we expect fully trained individuals to be ready to take over the work in LNP in 2024.

13. IWT Challenge Fund identity

We have ensured that all stakeholders are fully aware that the project is funded by the IWT Challenge Fund. We listed IWTCF as the sole funder in our permit applications to both wildlife authorities and

always ensure the IWTCF is credited in all publications, social media posts, and interactions with new potential partners in Mozambique.

The Lion Conservation Project is part of the EWT’s Carnivore Conservation Programme. Until June 2021, when we received co-funding from the Lion Recovery Fund, the IWT Challenge Fund was the sole funder for this project.

All partners, stakeholders, and permitting authorities in Mozambique and South Africa are aware that the IWT Challenge Fund is the primary funder of this work. We reinforce this at every opportunity.

14. Impact of COVID-19 on project delivery

During past years, COVID has had a serious impact on the project, with border closures and limited access to the Forward Operating Base. During the past year, we have had reliable access to KNP and LNP and have been able to conduct our work fairly smoothly. The two main remaining COVID impacts are financial in nature. COVID tests for border crossings are a significant unbudgeted cost. Also, to travel between the Mozambican and South African project areas, we must still drive through the southern border of Renata Garcia and back north rather than crossing the Giriyondo border post, which is within the study area. This turns a 2 hr, 115 km trip into a 13 hr, 800 km trip. This has greatly increased our vehicle operating costs. When this border post has opened, it will significantly reduce our travel costs and increase our efficiency. As long as borders remain open, the budget and timetable will remain the same.

15. Safeguarding

The EWT has a draft Safeguarding Policy, attached as Annex 13. This is still under development and should not be share publicly at this time.

Additionally, all new projects must be approved by the EWT Ethics Committee. This committee is comprised of both internal and external wildlife scientists, conservationists, and welfare experts in South Africa. This process, particularly the input of external reviewers, ensures that we have considered all impacts and risks to humans, animals, and ecosystems and that we have mitigated for potentially negative impacts. This project has received ethic clearance number EWTEC2019_007 (Annex 14).

16. Project expenditure

Table 1: Project expenditure during the reporting period (April 2021-March 2022)

Current Year’s Costs	2021/22 Grant (£)	2021/22 Total actual Darwin Costs (£)	Variance %	Comments (please explain any variance)
Staff costs (see below)	██████	██████	██████	Keruska Pillay is the acting co-ordinator of the project. Freeland has under-allocated their salaries by ██████
Consultancy Costs	██████	██████	██████	The full amount of the video production has been incurred in this financial year. Freeland under-allocated their consultancy

				costs by [REDACTED] according to the budget.
Overhead Costs	[REDACTED]	[REDACTED]	[REDACTED]	These line items were accurately budgeted.
Travel and subsistence	[REDACTED]	[REDACTED]	[REDACTED]	Our Vultures for Africa Programme did not spend [REDACTED] on poison response training because these costs were covered by the host protected areas or by co-funding. We request permission allocate these funds to poison training materials as indicated under Operating Costs.
Operating Costs	[REDACTED]	[REDACTED]	[REDACTED]	We have underspent on camera trap batteries because they have not yet been needed. However, these cameras will be a pivotal tool over the next year, so we request the we be able to spend the remaining [REDACTED] on batteries over the next year. If approved, we will submit a Change Request. Additionally, we spent [REDACTED] more on poison training materials than budgeted. We request permission to offset this amount against unspent funds earmarked for travel, venue hire, meals and insurance for poison training.
Capital items (see below)	[REDACTED]	[REDACTED]	[REDACTED]	The VHF antenna cost slightly less than projected.
Others (see below)	[REDACTED]	[REDACTED]	[REDACTED]	These line items were accurately budgeted.
TOTAL	[REDACTED]	[REDACTED]		

17. OPTIONAL: Outstanding achievements of your project during the reporting period (300-400 words maximum). This section may be used for publicity purposes

I agree for the IWTCF Secretariat to publish the content of this section (please leave this line in to indicate your agreement to use any material you provide here).

The most outstanding achievement from the project is the fact that 407 law enforcement staff from the GLTFCA were trained on wildlife poisoning response since June 2021. The funding provided by IWT was the catalyst for further funding being sourced that made the training of a far greater number of learners possible. With the effective use of the training provided, we have seen a significant decline in the number of wildlife mortalities suffered during poisoning incidents during 2021. This is a testament to value of the improved knowledge and skills obtained through the training, but also increased awareness and support from management of the respective areas.

24. Checklist for submission

	Check
Different reporting templates have different questions, and it is important you use the correct one. Have you checked you have used the correct template (checking fund, type of report (i.e. Annual or Final), and year) and deleted the blue guidance text before submission?	X
Is the report less than 10MB? If so, please email to IWT-Fund@ltsi.co.uk putting the project number in the subject line.	
Is your report more than 10MB? If so, please discuss with IWT-Fund@ltsi.co.uk about the best way to deliver the report, putting the project number in the subject line.	
Have you included means of verification? You should not submit every project document, but the main outputs and a selection of the others would strengthen the report.	X
Do you have hard copies of material you need to submit with the report? If so, please make this clear in the covering email and ensure all material is marked with the project number. However, we would expect that most material will now be electronic.	
Have you involved your partners in preparation of the report and named the main contributors	X
Have you completed the Project Expenditure table fully?	X
Do not include claim forms or other communications with this report.	