



## 2023 TREPA Indaba Executive Summary

The TREPA research project aims to fill knowledge gaps regarding the intersectionality of risks for zoonotic diseases of pandemic potential and the wildlife use and trade with a One Health approach. TREPA is a 5-year project that started in September 2022. The TREPA team began collecting environmental and animal data in September 2023 and expects to begin collecting social science data in early 2024. The 2023 TREPA Indaba was hosted by the Threat Reduction for the Environment, People, and Animals (TREPA) project at the Southern African Wildlife College (SAWC), in Hoedspruit, South Africa between September 6 and September 10, 2023.

**Purpose:** The 2023 TREPA Indaba was foreseen by the research team as a space to inclusively co-design opportunities for learning about the links between human and animal health and emerging disease detection. Co-design is a powerful mechanism for gathering the knowledge and expertise of a wide range of stakeholders to ensure that TREPA is well-designed and responds to local needs. The Indaba was also conceived as a space to foster experiential learning opportunities, promote networking, and establish new relationships among the participants and the TREPA team.

**Structure:** The 2023 TREPA adapted multiple adult learning pedagogies in order to achieve objectives. Experiential and comprehensive learning activities were implemented every day and interspersed with facilitated discussion sessions, relationship-building, and feedback opportunities. All activities commenced with real-time translation of English, Portuguese, and Shangaan.

**Participants:** The TREPA team invited participants from multiple sectors, including community members and leaders, scientists, government officials, traditional healers, parastatal and private sector representatives, and non-governmental organization personnel. A profile of participants who attended the Indaba is included in **Appendix A**.

**Highlights:** The event was opened on **September 6, 2023**, by the SAWC in an introductory gathering called 'Networking under the Boma Tree.' During this activity, TREPA introduced participants to the project team and played the 9-dot game, which served as an example of '*thinking outside the box*' and, therefore set the tone for Indaba as a novel experience for codesign and experiential learning. The goals of the game were to have a lived experience with the following concepts: we tend to think within certain frameworks visible or invisible; thinking about novel solutions requires thought; finding new ways or alternatives can be a trial/error exercise; and it is possible to find new alternatives.

The second day, **September 7**, started with an experiential learning activity for 20 participants who booked themselves for the first game drive. The SAWC is in a diverse savannah ecosystem open to Kruger National Park and was a perfect setting to facilitate learning and discussion about socio-environmental systems. Provocations for the game drive included: How does management of disease in a national park influence humans, animals, and environment? How does this influence the local community, birds/vultures, disease in livestock etc., and Why is the Pafuri area a hotspot for anthrax? Disease ecology includes many environmental factors. Some can be managed/manipulated (forestry/herbivore management) - others less so. Following the experiential learning activity, Drs. Alan Gardiner from SAWC and Meredith Gore from the University of Maryland led a comprehensive learning



talk where they both described the importance and purpose of experiential learning and team science. A group picture was taken, and then TREPA hosted a networking session about anthrax led by Dr. Henriette van Heerden from the University of Pretoria. Immediately afterward, Mr. Andre Botha from Endangered Wildlife Trust and Dr. van Heerden led a talk about the Genesis of TREPA and shared with the audience how the research team had identified the need for interdisciplinary research on anthrax, vultures, the wildlife trade and use, and the risks of zoonotic diseases of pandemic potential. The talking sessions were concluded by Dr. Lee Schwartz from The U.S. Department of State, who stressed the importance of spatial data and mapping for decision-making. All comprehensive learning presentations are available in English and Portuguese at TREPA's website: <https://conservationcriminology.com/trepa-2/> under the tabs '*Indaba Opening*', '*Genesis of TREPA*', and '*Maps for Decision Making*'. After comprehensive learning activities concluded, the experiential learning activities continued with a SAWC K9-dog demonstration with the anti-poaching dog unit. Participants learned about the dogs' ability to follow a track and the tactical support they provide for rangers. Dog-community interactions, challenges associated with K9 dogs, and funding. Participants visited the K9 unit kennels, where they learned more about how dogs and humans train to work together and the characteristics of working dogs versus training dogs. Questions for provocation included: What can dogs be used for? What is the role of dogs in detecting zoonosis? What other working animals are there? What risks are there in having these animals (Disease transfer, impact of the bush on the animals) at the kennel and as a group? The provocation was followed by a walking tour of the ranger camp where the head instructor explained details about the training, recruitment, and cadet retention, access to ranger education, and gender equality among the trainees. The second day concluded with a space for provocation led by Dr. Annette Hübschle from the University of Cape Town and Mr. Vusi Tshabalala, one of the participants, where everyone had a chance to verbalize their thoughts and opinions on the experiential learning activities that had taken place.

On Day 3, **September 8**, after the experiential learning game drive, the day started with a comprehensive learning presentation led by Drs. van Heerden, Barb Wolfe of Colorado State University, Gareth Tate of EWT, Vivienne Williams of the University of Witwatersrand, and Annette Hübschle during which they explained the One Health concept to the participants from different perspectives. At the opening of this talk, Dr. Juan Martín Dabezies of the University of Maryland led the '*Arms Crossed*' game to showcase the difficulties in changing behavior. Immediately after, Dr. van Heerden explained the One Health concept from an anthrax perspective, while Dr. Wolfe emphasized on the emergent diseases. Dr. Tate explained the role of vultures regarding anthrax, Dr. Williams explained the potential ways in which anthrax-contaminated vultures could impact the traditional healers or their patients, and Dr. Hübschle explained the risks associated with wildlife poisoning. These presentations are available in English and Portuguese at TREPA's website: <https://conservationcriminology.com/trepa-2/> under the '*One Health*' tab.

At noon, all participants, accompanied by the TREPA team, departed by bus towards Moholoholo Rehabilitation Center. At Moholoholo participants were able to see African vulture species and other raptors such as Bataleurs that have suffered wounds and are currently being rehabilitated. Participants the chance to learn more about Moholoholo's work in the area via a private tour by a Center Docent and witness firsthand some of the consequences of wildlife poaching and poisoning of vulture species. The experiential learning activity concluded with a "vulture restaurant" by setting up a road-killed carcass that had been cleaned of most of its meat for wild vultures to come and feed off. The vulture feeding was a key experience to showcase to participants the role of vultures as efficient environmental cleaners



of carcasses but also allowed many participants to extrapolate the potentially devastating consequences of vulture poisoning. The day concluded with a provocation. All participants were divided into two groups and shared their impressions, opinions, and ideas about what they had just experienced. The provocation led to constructive debates about wildlife conservation versus poverty alleviation, vultures as endangered species, and the recognition of linkages between social and ecological systems.

On Day 4, **September 9**, TREPA hosted an experiential learning game drive followed by a talk on Location Science led by Dr. Kevin Curtin from the University of Alabama. This session elicited the participant's knowledge and perceptions on the objectives, constraints, and connections for and between (i) Wildlife / Conservation / Trade & Use, (ii) Health / Disease Transmission / Risk Reduction, and (iii) Governance / Policy or Law. For these purposes, the participants self-divided into small groups of three and each group was handed a graph where they could write down their thoughts and reflect the connections between objectives and constraints. After the presentation, TREPA hosted a networking break during which community leaders from South Africa and Mozambique were asked to gather and discuss topics that had been presented to them throughout the Indaba. As a result of the community-only discussion, the community leaders produced a cogent list of key questions that they believed could begin to be addressed by the TREPA project, their recommendations for the execution of the project in key geographies, and their expectations for future engagement with TREPA. After the networking session, TREPA hosted a talk on umuthi led by Ms. Nolwazi Mbongwa, a traditional healer and scientist, along with Drs. Vivienne Williams and Annette Hübschle. Their conventional learning talk focused on understanding the traditional healing practices, the scale of wildlife trade for traditional healing purposes, and the concept of contested legality. Immediately after, Drs. Wolfe and Fabiola Quesada hosted a provocation on drivers, actions, and challenges for anthrax based on a One Health approach. Presentations from Day 4 are available in English and Portuguese at TREPA's website: <https://conservationcriminology.com/trepa-2/> under the tabs labelled as '*Modelling Systems*' and '*Umuthi*'.

Day 4, finalized by a gathering under the Boma tree where South African and Mozambican community representatives asked questions, provided TREPA with feedback, and agreed on establishing ongoing communication channels such as a WhatsApp group with community members. With the communities' endorsement, the TREPA research project was officially launched, and a traditional dance troop of local youth were invited to celebrate this important milestone.





Academia	TREPA Team	Female	United States
Academia	TREPA Team	Female	South Africa
Academia	TREPA Team	Female	South Africa
Academia	TREPA Team	Female	South Africa
Academia	TREPA Team	Female	Mozambique
Academia	TREPA Team	Male	South Africa
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NGO	TREPA Team	Male	South Africa
NGO	TREPA Team	Male	South Africa
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NGO	TREPA Team	Female	South Africa
NGO	TREPA Team	Female	South Africa
Translator	TREPA Team	Male	Mozambique