

## Final Evaluation Report

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Your Details	
<b>Full Name</b>	Hiral Naik
<b>Project Title</b>	Assessing human-snake conflict in the north-eastern regions of South Africa using research, education, and engagement with local communities
<b>Application ID</b>	34103-1
<b>Date of this Report</b>	10/08/2022

**1. Indicate the level of achievement of the project's original objectives and include any relevant comments on factors affecting this.**

Objective	Not achieved	Partially achieved	Fully achieved	Comments
Visit five schools and educate 225 learners about snakes.				We visited six school groups and educated over 400 learners about snakes and snakebite.
Visit five communities and educate as many members as possible about snakes.				We visited two communities, and two hospitals in the area to conduct educational talks.
Host a snakebite symposium and educate healthcare workers about snakes and snakebite first aid.				Our team were panel members of the 1 <sup>st</sup> South African Snakebite Symposium and contributed towards the organisation of the event.
Conduct research on medically important venomous snakes.				Our desktop research on medically important snakes was used to create posters and will be used to make snakebite risk maps.

**2. Describe the three most important outcomes of your project.**

**a).** We successfully visited six school groups in a rural part of the Hoedspruit area twice, once a month for 2 months. We successfully carried out our pre- and post-talk surveys to gauge the perceptions that learners have of snakes and to evaluate the impact of our education efforts. The results of the survey indicate the importance of our education efforts within these rural communities. A core part of our education focuses on snake biology, and we continue to learn more about snake biology through our research efforts.

**b).** Our visits to the two hospitals have been an important step forward in establishing relationships with healthcare professionals in our area to mitigate snakebite. Our transdisciplinary collaborations have allowed us to view a different perspective of snakebite and work towards educating the healthcare professionals about snake biology and pre-hospital health seeking behaviour.

**c).** Being a core part of the 1<sup>st</sup> South African Snakebite Symposium has been a very important outcome of this project. Our project members were able to make important networks in the South African snakebite community and we are now members of the National Snakebite Advisory Group which serves to stay informed on snakebite cases in South Africa. There will be future symposia to further tackle snakebite in South Africa and we are proud to be key role players in preventing

snakebite through education, research, and conservation. We are also working very closely with the World Health Organisation (WHO) to prevent snakebite.

The collection of valuable data through our surveys has been quite a significant achievement as monitoring and evaluation tools have not always been considered in qualitative education and conservation work. We have gained knowledge on what we are doing right but also ways that we can improve and expand our efforts. Our surveys enable us to further involve the Department of Basic Education in our efforts and implement lesson plans about snakes and snakebite in school curricula. Through our efforts we hope to encourage others to care about the natural world and contribute positively towards it.

**3. Explain any unforeseen difficulties that arose during the project and how these were tackled.**

Our project ran quite smoothly for the most part. The only challenge we encountered was not being able to host a snakebite symposium in October 2021 as we had hoped. This was due to various reasons including costs as well as Covid-19. However, the plan was to host the symposium in July 2022 and unfortunately, another organisation had already made plans to organise the event first. As we work closely with the organisation, we were able to play a big part in the event. Three of our team members were panel members and we assisted in organising guests and speakers for the event. As this was not a huge cost burden in the original project budget, we do not consider it a huge difficulty. Logistically, we could not visit five communities as planned but we did manage to visit two community initiatives and two hospitals. We had some challenges in getting risk mapping data, but the maps will still be made within the next year.

**4. Describe the involvement of local communities and how they have benefited from the project.**

The local communities have educated us about the myths and fears that they have about snakes, which has enabled us to design better lesson plans to debunk these myths. An important aspect of our work is building valuable relationships with the local communities to gain their trust and to encourage them to view snakes in a positive light. Through our snakebite symposium, we were also able to involve traditional healers that are willing to work with snakebite experts to better assist snakebite victims. This is a crucial step in initiating collaboration between the local communities and snakebite experts. We will continue to work very closely with members of different local communities.

**5. Are there any plans to continue this work?**

Yes, absolutely. Our education efforts so far have indicated that there is a huge need for education about snakes and snakebites and we will continue our efforts indefinitely. Within the next few years, we will visit more schools and communities and build more partnerships to implement our work. As our project is one of the only projects to focus on preventing snakebite in South Africa, we will have important contributions to make in the future within the snakebite community. We plan to

implement further projects to train local community members to be snake rescuers ('snake ambassadors') within their community and we will continue to share our knowledge with them. We hope to replicate our education model in other parts of South Africa through various collaborations and partnerships and we hope to implement important snake education lesson plans in school curricula on a national scale.

#### **6. How do you plan to share the results of your work with others?**

The data from our education surveys will be published in a peer-reviewed paper within the next year. We also plan to create additional identification posters on snakes, snake safety and other reptiles in the area. We have already presented some of this work at several conferences (Herpetological Association of Africa mini symposium, South African Snakebite Symposium, International Congress of Zoology) and we will continue to present this work at additional conferences and symposia. We have also continuously shared our project updates through our various social media channels.

#### **7. Looking ahead, what do you feel are the important next steps?**

One of the most important steps will be to publish our work and disseminate the results. We will also be creating more education content for various groups (learners and healthcare professionals) and translating this into the local language. We will also be planning important education and training sessions for the next year (2023).

#### **8. Did you use The Rufford Foundation logo in any materials produced in relation to this project? Did the Foundation receive any publicity during the course of your work?**

Yes, The Rufford Foundation logo has been used on our poster on 'medically important snakes of Hoedspruit', 'Snakebite dos and don'ts' and 'Snake facts and myths'. We also used the logo on our presentations and the various conferences we have attended and as such the Foundation has received publicity on a global scale.

#### **9. Provide a full list of all the members of your team and their role in the project.**

**Hiral Naik** - Project leader (Planning and coordinating the project and presenting to the learners)

**Christopher James Cooke** - Project Co-leader (Planning and presenting to hospitals)

**Dr. Jessica Briner** - Project assistant (Assisting in carrying out all educational activities from set up to coordination)

**Given Ndlovu** - Project assistant (Assisting with snake demonstrations and communicating all work into the local language where necessary)

**Silence Mahlangu** - Project assistant (Assisting with snake demonstrations and communicating all work into the local language where necessary)



10. Any other comments?

It has been a great privilege to have this project funded by The Rufford Foundation and to carry out important education and conservation work on snakes. We look forward to further contributing towards positive changemaking.

## Medically Important Venomous Snakes of Hoedspruit

Hoedspruit is home to a large diversity of snakes but only a few are of medical importance to humans.

				<p>Polyvalent antivenom Monovalent antivenom No antivenom available</p>	  
<p><b>⚠️</b> Venomous and causes human fatalities. Requires antivenom</p>		<p><b>⚠️</b> Venomous and causes painful bites but do not require antivenom</p>			

 <p><b>Black mamba</b> <i>(Dendroaspis polylepis)</i></p>   	 <p><b>Mozambique Spitting Cobra</b> <i>(Naja mossambica)</i></p>    	 <p><b>Puff Adder</b> <i>(Bitis arietans)</i></p>   
 <p><b>Snouted Cobra</b> <i>(Naja annulifera)</i></p>   	 <p><b>Boomslang</b> <i>(Dispholidus typus)</i></p>   	 <p><b>Twig Snake</b> <i>(Thelotornis capensis)</i></p>   
 <p><b>Stiletto Snake</b> <i>(Atractaspis bibronii)</i></p>   	 <p><b>Intermediate shield-nosed cobra</b> <i>(Aspidelaps scutatus intermedius)</i></p>    	 <p><b>Snouted Night Adder</b> <i>(Causus deflippii)</i></p>   

**Snakebite Protocol**

In the event of a snake bite from any of these snakes, please go to your closest hospital immediately. Only doctors in a hospital can administer antivenom. Please ensure that the victim stays calm and immobilized.

Hoedspruit Reptile Centre has an Antivenom Bank.

-Please note that we can provide the antivenom but this must be administered by a doctor at a hospital- Contact us on 064 516 7439

**Contact Us**

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