

Final Evaluation Report

Your Details	
Full Name	Jose Luis Perez Gonzalez
Project Title	Ensuring Harlequin Toad Conservation in Two Important Biodiversity Areas in the Sierra Nevada de Santa Marta
Application ID	37550-2
Date of this Report	July 2023

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
Evaluate the population status of <i>Atelopus laetissimus</i> in IBA rio frio y IBA San lorenzo SNSM				According to our schedule of activities, we were able to carry out six field events to monitor the population status of <i>A. laetissimus</i> in the IBA of Rio Frio (three) and in the IBA of Estrella Hídrica de San Lorenzo (three).
Epidemiological monitoring of <i>A. laetissimus</i> in San Pedro SNSM				We were able to obtain epidemiological samples (swabs) from the population during each of the field visits to later carry out the analyses that would determine the presence/absence of the Bd fungus.
Raising awareness in the local community about the importance of amphibians and harlequin toads in the SNSM				We carry out recreational activities together with communities and local leaders, promoting environmental education spaces such as support for cultural fairs, in addition to two comprehensive activities focused on children and young people from rural schools and ecological groups on the conservation of biodiversity in their territory.
Implementation of ecological points to mitigate the impact of tourist activities in hydrographic basins of the IBA San Lorenzo				We installed two ecological points in the Estrella hidrica de San Lorenzo IBA, specifically in the Cuca stream, one of the most important water tributaries in the IBA, due to the high influx of visitors and the associated diversity.
Creation of audiovisual material to increase social awareness and community empowerment for the protection of natural resources				An informative video of the work carried out with the rural schools and boarding schools of the IBA in Rio Frio and San Lorenzo was generated, on the importance of amphibians, natural resources and the protection of territory, for dissemination through digital platforms and local allies.

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

a). Our most important scientific achievement during the execution of this project is to continue obtaining relevant data and information on the dynamic populations, which add to the global efforts to safeguard the species of the genus *Atelopus*. Currently, our analyses show a stable trend in the study populations and we have been able to corroborate the presence of traces of the Bd fungus only for the San Lorenzo IBA, a fact that motivates us to continue and improve our long-term epidemiological and population monitoring efforts to these species in the Sierra Nevada de Santa Marta.

b). At the social level, we have managed to strengthen the processes and bonds of trust with the local communities of the IBA's San Lorenzo and Rio Frio, greatly increasing the participation of local actors, social leaders and especially of children and young people from rural schools. In activities that promote the conservation of the territory and natural resources, based on environmental education activities, fun days, awareness talks, recycling activities and the implementation of ecological points to mitigate the impact of pressures such as urban growth and tourism in the area.

c). We also recognise that one of our greatest successes in the implementation of this project is the great reach and diffusion that we have obtained through digital platforms, as a new tool to promote the participation of communities and demonstrate the progress and actions that we have been able to carry out together with them, taking advantage of all the audiovisual and photographic material in a more didactic way, bringing the new generations closer, inviting them to take ownership of conserving the biodiversity that surrounds them, has generated a broader vision of the impact that we can have with our actions of conservation.

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

For the implementation of this type of conservation projects, we have previous work in the monitoring areas, which has allowed us to generate a direct approach with the local communities, whom we involve in the development of our activities, maintaining communication ties. and work nearby. This has allowed us to guarantee practically all the success in the execution of our objectives and the normal development of our schedule of activities. Therefore, they are very specific unforeseen events such as very heavy rainy seasons that sometimes make it impossible to access communities or study areas where remote conditions and roads in poor condition can limit our activities, likewise, specific unforeseen events such as repairs or breakdowns in our vehicles sometimes cause us to reschedule some trips. However, we have flexible schedules and a schedule designed with our work team that allows us to anticipate this type of scenario and still be able to meet all objectives.

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

We have prioritised a large social component in this project, based on participatory construction together with community leaders, local actors and young students that allows us to understand the needs and prioritise mitigation actions to implement in conservation areas. In this way, we try to generate a greater impact in the communities through talks, workshops, dialogue tables and recreational activities. Encouraging interest in the conservation of biodiversity in the territory. At the same time, we have provided the installed capacity with the implementation of ecological points in strategic areas within the territory, reducing the effects caused by activities linked to urban expansion and the growth of tourism in the IBA of San Lorenzo, in addition to supporting these efforts. with the creation of audiovisual material that promotes the message for the conservation of the Sierra Nevada.

5. Are there any plans to continue this work?

Our work represents a process to contribute to international efforts to ensure the long-term conservation of species of the genus *Atelopus*, focusing our interest in the Sierra Nevada de Santa Marta, through work with local communities. This second phase of implementation has allowed us to continue our baseline population and epidemiological monitoring covering two strategic areas of the Sierra Nevada. Empowering local communities about its importance, and directly involving them in the implementation of strategies to mitigate threats such as garbage and pollution, through ecological points and support for the cultural and ecological fair in San Pedro. Without a doubt, we intend to continue implementing our line of research focused on the conservation of the *Atelopus* genus as flagship species of biodiversity in the territory and expanding these efforts to new locations, increasingly involving local actors, peasant and indigenous communities in the search for strategies and solutions to ensure the conservation of these species in the short, medium and long term in the SNSM.

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

We plan to share the results of our conservation project through interviews with the local and international press, massively promoting all the audiovisual material that we have been able to collect from talks, workshops and monitoring through our channels and digital media (webpage and social networks). In addition, we intend to share our experiences and population data in scientific articles, support in national and international symposiums and congresses, as well as local government entities (National Natural Parks of Colombia), initiatives (Atelopus Survival Initiative) and international strategic allies (Amphibian Survival Alliance).

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

Our aspirations as an organization are broad for the future, among which we intend to maintain our *Atelopus* population monitoring baseline, creating sustainable strategies and strengthening work with local communities to ensure their conservation. In addition to expanding our spectrum of study to initiate new lines of

research and monitoring for endemic and threatened amphibian species in the Sierra Nevada, as well as designing new strategies and implementing conservation actions directly involving local actors in mitigating threats and full recovery of their territory. We also intend to continue applying for the subsidies offered by Rufford, which have been a fundamental support in the development of our activities and in the achievement of our conservation objectives.

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?

Absolutely, during the execution of this project, we have promoted our different funders and strategic allies, we have generated didactic material such as banners, presentations, ecological points and posters for workshops where we have shared the logo of The Rufford Foundation, in addition to explaining to the community, how was the support received from the organisation and the objectives that we had to develop to successfully complete the project. Likewise, we have placed The Rufford Foundation on our website as partners and we have also advertised through our digital platforms, tagging the organisation in the different activities carried out, generating greater dissemination of the support received.

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

José Luis Pérez González: Leader and scientific coordinator of the project. Coordinate the schedule, create research protocols, train team members for research and education and outreach activities, define tasks and responsibilities, and ensure integration of work and achievement of objectives.

Jeferson Villalba Fuentes: Fieldwork Coordinator. Coordinate field trips, protocols, and methodologies for population monitoring and associated data analysis. Organization of meetings with local and indigenous communities and environmental authorities in the study area.

Yurladis Mariño: Community leader in San Pedro de la Sierra, president of Rural Women Building Future, coordination and planning of environmental education activities, and meetings with environmental entities in San Pedro de la Sierra, IBA rio frio.

Fredy Rincon: President of the community action board of the village of bella vista, coordinator and planning of environmental education activities and installation of ecological points in critical areas of the IBA de San Lorenzo

Sintana Rojas Montaña: Coordinator of environmental education. Coordinate methodologies in environmental education activities and workshops in local schools and focus groups in the local community.

José Daniel Barros: Communication and Education Coordinator. Organization and planning of environmental education activities, dissemination of results of the activities, and workshops developed during the execution of the project.

10. Any other comments?

This second stage of implementation of activities is an important advance to continue the efforts of conservation of amphibians and biodiversity in an integral way together with the local communities in the Sierra Nevada de Santa Marta. We have managed to obtain data that allows us to continue monitoring the dynamic populations of the *Atelopus*, at the same time that the social component brought the local communities even closer through talks and workshops on participatory construction and initiation of actions to mitigate the impacts of urban expansion and tourism in the IBA of San Lorenzo, as well as encouraging ecological groups and young people from rural schools to become the natural protectors of their territory.

In addition, we have been able to implement for the first time the creation of audiovisual material as a social empowerment tool for local communities and visitors in the area, which allows them to become aware of the impact we generate on natural environments and engage local actors in uniting efforts to safeguard the natural resources of the territory and its biodiversity.



Figure 1. Population and epidemiological monitoring of *Atelopus* sp in the IBA San Lorenzo and Rio Frio.



Figure 2. Support and participation in the first ecological and cultural fair, in addition to the accompaniment of local leaders in San Pedro de la Sierra IBA rio frio



Figure 3. Environmental education activities with children and young people from rural schools and boarding schools in the village of Bella Vista and La Tagua, IBA de San Lorenzo



Figure 4. (Before/after) Prioritization of conservation actions with the implementation of ecological points in critical areas of the IBA San Lorenzo, to reduce the impact of garbage near water tributaries.



Figure 5. Participatory construction workshops with social leaders and local actors to create mitigation strategies and prioritization in conservation actions to ensure the survival of harlequin toads (*Atelopus* sp).