Community-based conservation program of three endangered species of river turtles with Amazonian indigenous communities of Colombia and Peru 2012

RSG reference: 11943-B

FINAL REPORT 2012

Reporting period: July – December 2012

Species involved: giant South American turtle (*Podocnemis expansa*) - CR, yellow spotted river turtle (*P. unifilis*) - EN and six tuberculed river turtle (*P. sextuberculata*) - VU.

Project location: Colombian and Peruvian indigenous communities of the Amazon River.

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Abstract

Based on a local initiative, in 2008 Fundacion BioDiversa Colombia (FBC) started a community-based turtle conservation program in the Santa Sofia Indigenous Reserve, Colombia, to preserve *Podocnemis expansa* (CR), *P. unifilis* (EN) and *P. sextuberculata* (VU) in the area for future generations. The program has focused on awareness-raising and environmental education, direct conservation actions and capacity-building and training of local conservation groups (LCGs). Each year the program has grown in participating communities, local conservation groups and turtle guardians. During the 2012 phase, three experienced and one new groups from four communities (three Colombian and one Peruvian) participated in the monitoring, totalling 48 turtle guardians (men and women of all ages). Guardians monitored the three main nesting beaches of the area during the reproductive season until hatching. Increased participants and raised awareness of the communities of the area yielded unprecedented results, being by far the most successful season since the start of the Program. Guardians reached a total of 60 protected nests (95% of the total nests) of the three species (compared to max. 18 in previous years), including 34 protected nests of *P. sextuberculata* (max. 8 in previous seasons) and two of *P. expansa* (max. 1 in previous seasons). 1247 hatchlings (84% of the total eggs, max. 559 in previous seasons) arrived safely to the River, including 410 of *P. sextuberculata* (max. 64 in previous seasons) and 215 of *P. expansa* (max. 50 in previous seasons). 63 females (100% of the total nesting females) were protected from being hunted during nesting on the protected beaches, due to the presence of the guardians.
LCGs invited schools of the area, authorities and members of participating and neighbor communities to witness hatching and help new-borns reaching the river, to raise awareness about turtle conservation and about the importance of their work. Monitors also received active support from the Colombian Environmental Police. The enthusiasm of turtle guardians has reached other communities and already two new communities from Peru have shown great interest in participating for next year. For 2013 season we expect around 75 monitors, from six LCG and six participating communities of both countries, protecting the four main nesting beaches of the area (two in Colombia and two in Peru).

Introduction

Many natural populations of the Amazonia have been critically reduced over the last decades. This is especially significant in areas near major ports, where economy-dependence and lack of sustainable economic alternatives have driven indigenous communities to over-exploit their natural resources, such as Amazon River turtles (*Podocnemis* spp.). Excessive egg poaching and nesting female hunting during reproductive seasons for commercialisation and for local consumption have reduced their populations to critical levels and to be threatened to various degrees: in IUCN Redlist, *P. expansa* appears as Lower Risk/conservation dependent and *P. sextuberculata* and *P. unifilis* as Vulnerable (IUCN 2010, ver 2.3, 1994, needs updating). *P. expansa* was uplisted to Critically Endangered on a global basis by the TFTSG (Tortoises and Freshwater Turtles Specialist Group) (TCC [Rhodin et at.], 2011). In the last meeting of the IUCN - TFTSG, in Pará, Brazil (October 2010), *P. unifilis* was uplisted to Endangered (unpublished). Regionally, *P. unifilis* and *P. expansa* are Endangered (EN) in the Colombian Amazonia (Castaño-Mora, 2002), while *P. sextuberculata* is Data Deficient (DD), but also probably

threatened (Castaño-Mora & Medem, 2002). Based on key informants and personal observations, in the project area local populations of the three species have been critically reduced, in particular of *P. expansa*, due to excessive use and commercialisation in the major ports (Leticia, Tabatinga and Santa Rosa).

Based on a local initiative, in 2008 we started a community-based conservation program at nearly 40 km from Leticia, focusing on awareness-raising and environmental education, direct conservation actions and capacity-building and training of local conservation groups (LCGs). We have carried out educational and awareness-raising activities in participating communities, where LCGs have been formed. These have been in charge of monitoring and protecting turtle conservation beaches during successive reproductive seasons and socialising their activities among neighbour communities and schools.

We started up with one LCG in 2008 of six guardians and one pilot Colombian community, guarding one small conservation beach in the middle River. During the 2012 season, four LCG of four communities (three Colombian and one Peruvian), totalling 50 men and women of all ages, guarded the three main nesting beaches of the area (two in Peru and one in Colombia). Due to this participation, increased awareness of the communities of the area and acquired experience of the LCGs, this nesting season granted unprecedented results and was by far the most successful of the program.

Activities carried out

Before the start of the program, a refreshment training was carried out with all the turtle guardians, including monitoring techniques, data gathering, nest translocation, turtle tagging, communication, among others. The groups also socialised their activities among participating and neighbour communities, supported by the Colombian Environmental Police.

From July to September, four LCGs (three experienced and one in formation, three Colombian and one Peruvian) monitored the three main nesting beaches of the area, one in Colombia (Los Micos Island) and two in Peru (Corea Island and Puerto Alegría) (Figure 1). Twelve to fifteen monitors guarded the three conservation beaches during the night, to avoid nesting females from being extracted and nests from being poached by visiting fishermen. The beach was scanned for new nests twice every night (following female tracks). If monitors found a female during scans after nesting, they measured and marked it with a unique inconel tag before releasing it directly to the River. When new nests were found, they were marked and georeferenced, basic information was taken and tracks were thoroughly erased to avoid fishermen from finding them during the day. When tracks were impossible to erase, nests were translocated to new locations within the beach, following a rigorous protocol, to make them more difficult to find by day poachers.

Besides the participating LCGs, a small group of five volunteers from Santa Sofia Colombian community accompanied the experienced groups, to learn about the monitoring and also to watch over the conservation activities that were being carried out.

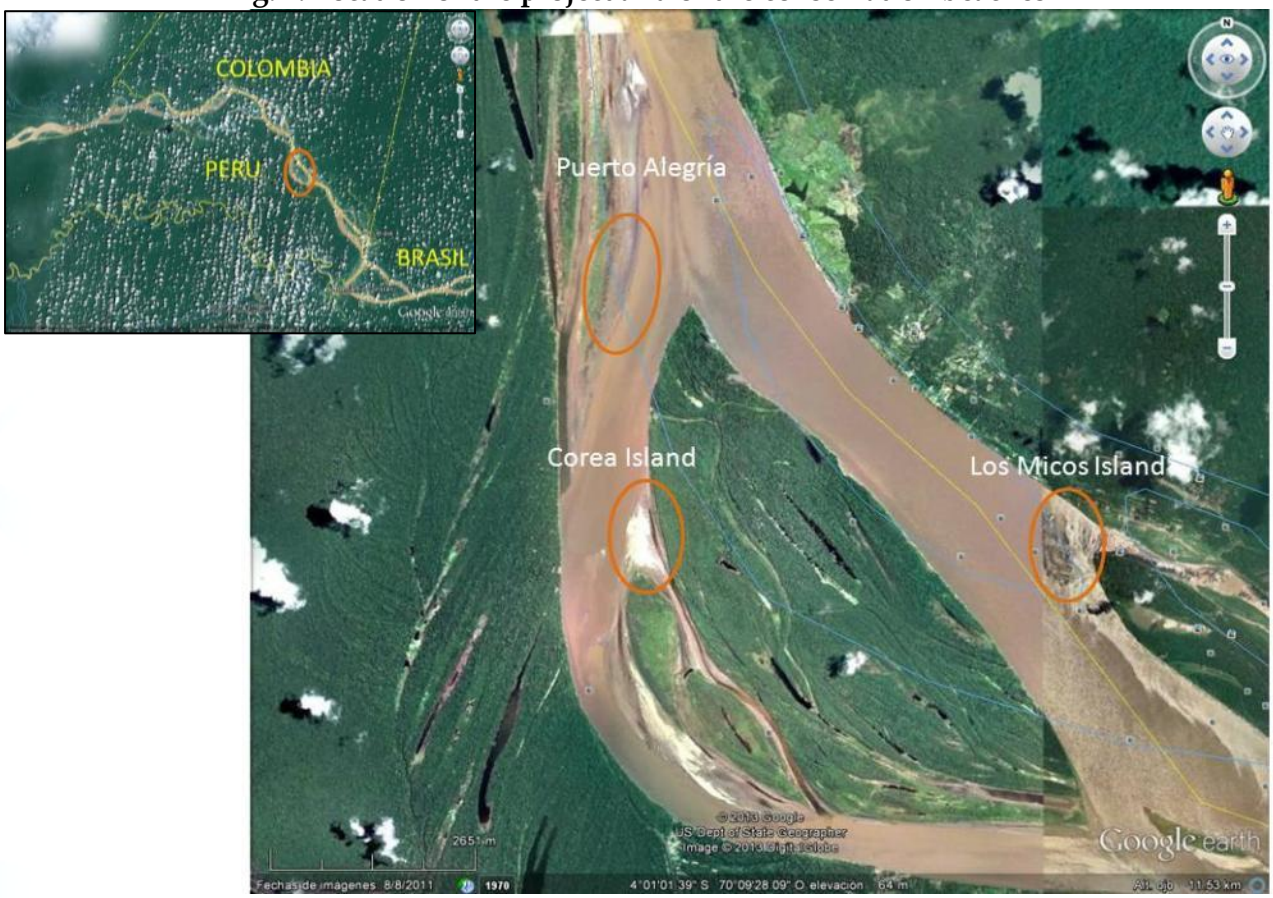
From September to December, groups continued to monitor the beaches at dusk, waiting for hatching to occur. When hatching started, they took basic information and helped the hatchlings to arrive safely to the River. This continued until the last nest had hatched and all new-born turtles had arrived to the River, which occurred on December the 1st.

By their own initiative, LCGs invited five local schools to witness hatching and to help new-borns reaching the water, and carried out awareness-raising activities and environmental education speeches with children and teachers.

At the end of the program, a meeting was held with all current and future participants to present the results and share personal positive and negative experiences of the season, seeking to improve results for next nesting season. One of the suggestions for next year was to start guarding a non-protected beach on the Colombian side of the Corea Island where several nesting events of *P. unifilis* had occurred. LCGs received collective and individual incentives and certificates for their conservation actions.

During the 2013 phase of the program, we also continued supporting handcrafter families from participating communities in a fair trade scheme in which their handcrafts are directly sold in Bogota, the capital city, as reward for their conservation efforts.

Fig. 1: Location of the project and of the conservation beaches



Main results

The 2012 season was by far the most successful of all in terms of conservation results, participation of local communities and appropriation of the program by the Local Conservation Groups. We guarded the three main nesting beaches of the area, including a new large beach that appeared on the Peruvian side of the River. Four LCGs from four communities (three experienced and one in formation) and 50 turtle guardians protected the beaches. Conservation-wise, several results showed unprecedented outcomes:

1. During the season, 60 nests of the three species were effectively protected until hatching; only three nests were lost due to human causes and 1247 new-borns safely reached the River, which are by far the highest numbers since the start of the program (see fig. 2). This shows that the groups have gained experience and are improving the effectiveness of their conservation work.
2. For the first time, we were able to protect 34 nests of *P. sextuberculata* (the highest of the three species and almost four to sixteen times higher than in previous seasons) and 410 hatchlings (more than six times higher than previous seasons). This is critical because, despite its small size, it is a perhaps the most vulnerable of the three species: it lays the fewest number of eggs per nest (max. 20, avg. 14.5, compared to *P. expansa* that lays more than 120 eggs per nest), it requires a particular type of beach for nesting (compared to *P. unifilis* that can lay eggs in different substrates) and hatching time is longer that the other species (*P. sextuberculata*: min 61, max. 83, avg. 65.8 days; *P. expansa* 57-58 days; and *P. unifils* min 49, max. 79, avg. 65.4 days), which makes the eggs more vulnerable to destruction by natural causes (flooding, predation).
3. For the first time, two nests of *P. expansa* were protected and 215 new-borns hatched safely, which is also an historical result within the Program (max. one nest and 50 hatchlings in previous seasons).

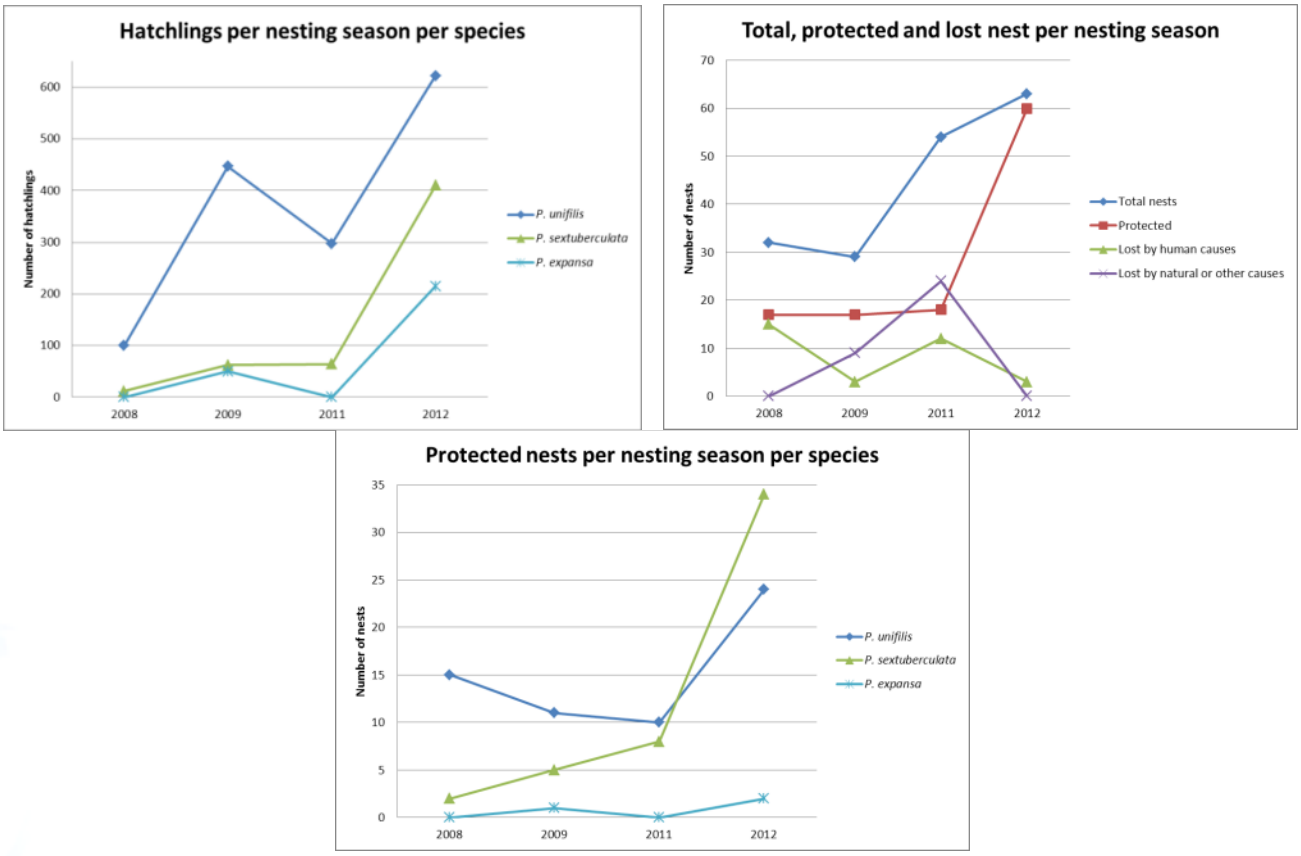
The fact that only three of 63 nests were destroyed by human causes and that the beaches were not visited during the night where the monitors were present is a highly significant result of the raised awareness of communities in the area and of the effectiveness of the monitor's work.

The LCGs by their own initiative invited local schools to witness hatching of the new-borns and carried out awareness-raising activities and environmental education speeches with the children, which is a clear indicator of their appropriation of the program.

Main challenges

Many of the initial challenges have been overcome, and the project has reached a great momentum in terms of participation, appropriation and conservation results. The current challenge the project faces is fund-raising, to be able to continue and expand the work of the LCGs and further improve conservation and awareness-raising results. First, we hope to continue expanding the program to involve more communities, more LCGs, more guardians and more beaches in the area and, second, we expect that conservation starts becoming a real and sustainable economic alternative for experienced LCGs; therefore, we need to further increase funding for upcoming years. We expect that joining efforts with international funds (such as Rufford Small Grants, MBZ, Turtle Conservation Fund and Turtle Survival Alliance, among others), governmental local and regional agencies and the tourism sector, we will achieve that goal for upcoming years.

Fig. 2: Main historic results of the program



Follow-up

For the 2013 season, two new LCG have already enlisted to the program: the Colombian Santa Sofia LCG, based on the volunteers that participated in 2012 from that community, and a joint LCG from two Peruvian communities: Yahuma II and Barranco. We expect a total of 75 turtle guardians from six LCG and six communities (three Colombian and three Peruvian) that will be guarding the four main nesting beaches of the area (two in Peru and two in Colombia).

We have attracted the attention of several local and regional institutions about the importance of the program, and these have expressed their will to support to the LCG for the 2013 phase. These include governmental institutions (Mayor House of Leticia, Amazonas Department Government, the Regional Environmental Agency Corpoamazonia and the Fire fighters Department of Leticia) and a private tourism company (Decameron Hotel). Informal meetings have been carried out and we are currently presenting them officially the project. We expect to gain enough economic support so that the three experienced LCGs start receiving an economic retribution for their work, so that conservation starts becoming an economic alternative for them. The new groups and the LCG in formation (Yahuma) will continue receiving collective and individual incentives for their work, while they gain enough training, experience and leadership.

Overall contribution to conservation of the species made by the project

In 2007, before the program started, there was little awareness about turtle conservation. Almost all nests were poached from the nesting beaches and, since they had no protection, many females were hunted while nesting. Local populations were already decimated due to excessive poaching and hunting for local consumption and commercialisation, and were surely facing their extinction. This had happened in other areas of the River, such as the area near the main ports (Leticia, Tabatinga and Santa Rosa), 40 km from the project site. In 2008 we started a pilot program that included one Local Conservation Group with 6 monitors that guarded one small conservation beach, and awareness-raising activities in a pilot community. That nesting season, monitors had a really hard time with poachers and hunters and, although could protect the females, more that 50% of the nests were lost; in total, they could only protect 17 nests and 112 new-borns of two of the three species. By 2012, following an awareness-raising campaign along the communities of the area and a constant expansion of the conservation actions, five LCGs from four communities of Colombia and Peru and 50 turtle guardians are actively participating in the Program. On the three main nesting beaches of the area, 60 nests and 1360 new-borns of the three species were protected, and less than 5% of the nests were lost due to poaching. Apart from the monitors, there were no night visitors to the conservation beaches and therefore the females were safe from hunting. Children from five local schools were taken to the beach to witness hatching of the eggs to raise their awareness about the importance of turtle conservation and about the work of the turtle guardians. For next year, two additional communities and two more LCG wish to participate summing up nearly 75 turtle guardians. Adding up to these important results in conservation, there is a strong evidence of the raised awareness of the communities of the area. Although local turtle populations are still far from being safe from extinction, the constant expansion of the program and of its conservation and awareness-raising results still give hope about a their recovery in time.

Sharing of results

The project was presented in the "Environmental Education in Continental Turtle Conservation Projects" national workshop held in November 2012 in Cali, Colombia, organised by World Conservation Society - Colombia, Turtle Survival Alliance, Asociación Colombiana de Herpetología and Zoológico de Cali.
It was also presented in the "Regional Workshop about new strategies for the integration of wildlife management in integral planification processes in the Ecosystemic Approach framework", organised by WCS and sponsored by the Andean Community of Nations's BioCAN Program and the Ministry of Foreign Affairs of Finland.
Finally, the project was included in the "Perspectives for research and conservation" section of the *Podocnemis unifilis* chapter, in the recently released "Biology and conservation of Colombian Continental Turtles" (2013) (Escalona et al., 2012). See Appendix for extracted pages and highlighted section in Spanish.

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Photographic material

Photos by Local Conservation Groups, Fernando Arbeláez and Andrés Felipe Aponte

Nuevo Jardin and Curuinsi Huasi LCGs after pre-monitoring refreshment training

Sign posted by the LCGs at the Santa Sofía Police Station to promote their work supported by the Environmental Police


Socialisation activities with participating and neighbour communities






Local Conservation Groups during nesting monitoring

Tracks and eggs of *P. unifilis*

Tagged females of *P. sextuberculata*

LCGs helping new-borns reaching the River

Socialising activities with Decameron Hotel at Los Micos Island to seek for their support in 2013

Awareness-raising activities with schools of the area

Closure meeting held in December with current and future turtle guardians