

Community-based conservation program of three endangered turtle species of the Amazon River with indigenous communities of Colombia and Peru - 2015 - 2016



INTERIM REPORT

US FWS reference number: F15AP01033

Reporting period: 8-09-2015 to 30-09-2016

Species involved: giant South American turtle (*Podocnemis expansa*), yellow spotted river turtle (*P. unifilis*) and six tubercled river turtle (*P. sextuberculata*).

Project location: Colombian and Peruvian indigenous communities of the Amazon River. Conservation beaches along the Colombian-Peruvian Amazon River. Coordinates: -4.047472, -70.110932

Principal Investigator: Fernando Arbeláez MSc. E-mail: ferarbe@fundacionbiodiversa.org. President / Legal Representative. Fundación Biodiversa Colombia

Project advisors: Mario Vargas Ramírez PhD. E-mail: mavargas@yahoo.com, Natalia Gallego PdD (c). E-mail: natagalle@gmail.com

Organization name: Fundación Biodiversa Colombia

Web-page: <http://www.fundacionbiodiversa.org/?p=1151>

Total Project Budget: USD 20,831 Funding Requested from USFWS: USD 14,602



Executive summary

The 2015 phase of the program focused on continuing and reinforcing training and involvement of Local Conservation Groups and their conservation and awareness-raising activities. Furthermore, the program aimed to reach agreements with key local institutions towards continuation of future phases of the program. During this phase, significant advances were carried out towards the program goal, which was to significantly reduce eggs and nesting females poaching in the area through empowering and capacity-building of Local Conservation Groups, specific conservation actions, turtle populations monitoring and awareness-raising of the communities of the area. Outcomes of this phase of the project include low nest poaching and zero nesting females hunting, increased nests and hatchlings of the two most vulnerable species, 100% of egg survival rate (excluding infertile eggs) and improved quality and organization of monitoring activities and data gathering by the LCGs. Furthermore, there was a further expansion of the awareness-raising activities with schools of the area and the expressed wish of new communities to be participate in future phases of the program.

Activities carried out during the period

Objective 1. To reduce eggs and females poaching on the main nesting beaches of the area, through protection and monitoring by Local Conservation Groups during the peak of the nesting season, with support of environmental authorities.

During the two monitored seasons (2015 and 2016), Local Conservation Groups guarded the four most important nesting beaches of the area, two in the Peruvian side and two in the Colombian side of the Amazon River. Monitoring started as soon as the beaches appeared (2nd of August in 2015 and 20th of July in 2016) and continued every night until nesting events had ended (30th of September). Mixed teams of 14-18 monitors per night, including new and experienced members, protected the nests and nesting females from poachers, and erased the tracks to avoid egg loss during the day. From the end of the nesting season, turtle guardians continued to protect the nests and the eggs every hatchling arrived safely to the river. When necessary, nests were transplanted within the beaches to avoid loss by flooding. From 2016, Corpoamazonia (the regional Colombian environmental authority) began to actively support the Program, signed a framework agreement with the Foundation and provided a letter of endorsement of the activities for the monitors. The local police also supported the activities with occasional patrols along the beaches and constant communication with the monitors.

Objective 2. To collect basic biological information on nesting and females to contribute to the knowledge of the species and to monitor the state of local populations over time.

For each nest they found, the monitors gathered basic biologic information (date, species and track width) and labeled the nest with a unique number. When a mother was found after nesting, they recorded also carapace size and related nest number, and marked it with a unique Inconel tag. After hatching, they recorded date, number of living hatchlings, and of dead and infertile eggs. The data was gathered by each group, with supervision of the coordinating LCG, and revised and compiled by the local field coordinator to check and correct possible errors. The data was then analyzed and compared to previous nesting seasons.

Objective 3. To socialize the activities of the Local Conservation Groups and to raise awareness of the importance of river turtle conservation amongst the communities of the area, focusing especially on the children.

During hatching in 2015, an environmental education team carried out educational activities with six schools of the area, three in Colombia and three in Peru, including the boarding school of Nazaret, in Colombia, the main secondary school of the area. The children received an environmental education lecture about the importance of turtle conservation and, when logistics allowed, they were invited to witness hatching on the beaches and adopt a turtle to release it in the water. In 2016, due to limited funds, only an activity with the boarding school of Nazaret was carried out. For each season, an opening and a closure event was carried out to socialize the activities, where participating and neighbor communities were invited.

Main challenges faced

The most unexpected difficulty we met was the significant reduction in nesting events after the year without protection (2013). Nesting decreased from 92 in 2013 to 45 and 44 the following years, but then started to raise again in 2016 (72). This may be an indication on the delicate state of the local turtle populations and their sensitivity to further poaching, and an evidence of the importance of pursuing the conservation actions. We would therefore expect the nesting events to continue increasing gradually after subsequent seasons with uninterrupted beaches protection and continuous awareness-raising among the communities of the area.

Another challenge was the increasingly more frequent alterations of the Amazon River pulse over the years: in the last two years, appearance of beaches, which historically started in mid-June, was delayed until end of July in 2014, beginning of August in 2015 and mid-July in 2016. This affects particularly *P. sextuberculata* nesting events being the first to nest in the season and much more specific in nesting substrate compared to *P. unifilis* (it requires dry fine grain sand beaches). Early flooding was a problem in 2016 and almost half of the nests had to be transplanted within the beaches to avoid loss. However necessary, this intervention perhaps was the cause of a lower hatching success rate in 2016, 86.2%, compared to 91.8% in 2015 where it was not needed.

Finally, another challenge the program constantly faces is limited funding. Although Corpoamazonia (the regional environmental authority) started co-funding the Program in 2016, the tourism industry of the area once again failed to compromise and several activities (in particular awareness-raising) had to be left out in that season. In 2016, most funding had to be directed to the most urgent activity, which was beach monitoring.

Principal outcomes

The most important outcome was the greater impact of the program in terms of conservation. Nest poaching passed from 89 nests in 2013 (when no beach protection was possible due to lack of funds) to 0 in 2014, to 4 in 2015 and to 0 again in 2016 (see graphs below). 2016 recorded the highest number of protected nests (71) and hatchlings (1854) since the start of the Program. While in 2013 traces suggested that some females had been hunted during nesting, this was avoided in 2014, 2015 and 2016 by the lack of night visitors on the conservation beaches due to the presence of the guardians; this is perhaps the most important conservation result. It is also important to highlight that the amount of protected nests and hatchlings of the two most vulnerable species (*P. expansa* and *P. sextuberculata*) increased from 2 nests and 24 hatchlings in 2013, to 21 nests and 542 hatchlings in 2015 and to 28 nests and 597 hatchlings in 2016 (see graphs below). This was also possible due to the increased participation, from 50 guardians in 2012, to 60, 70 and 75 in 2014, 2015 and 2016 respectively.

Another important outcome was the improved quality of the data gathering and the more effective beach monitoring by the LCGs. This was the result of increased experience and training of the guardians, and the implemented organization of the activities with a permanent local field coordinator and a supervising LCG. On one hand, all the data was gathered and compiled without mistakes in 2015 for the first time in the program. This suggests that the LCGs could be ready to be trained in more complex biologic data gathering for future seasons.

Finally, there are evidences of the positive results of the awareness-raising campaign and socialization of the program among the communities of the area. Environmental education activities were carried out during the hatching season, in 2014 with 3 schools and a gathering with children from three communities, and in 2015 with 6 schools of the area, which the children received with great enthusiasm. In 2016, due to limited funding, it was carried out only with one school.

Although poaching still occurred when the guardians were not present (four nests in 2015), there is a high recognition and respect for their work, as could be appreciated during the socialization meetings with community members and authorities from the area. Another evidence is the lack of night visitors on the conservation beaches, which avoids turtles from being poached while nesting. In 2016 one new LCG was formed, totaling six LCGs, four from Colombia and one from Peru. Finally, a new community from Peru is already willing to be included in future phases of the program, showing the expansion of the influence of the program.

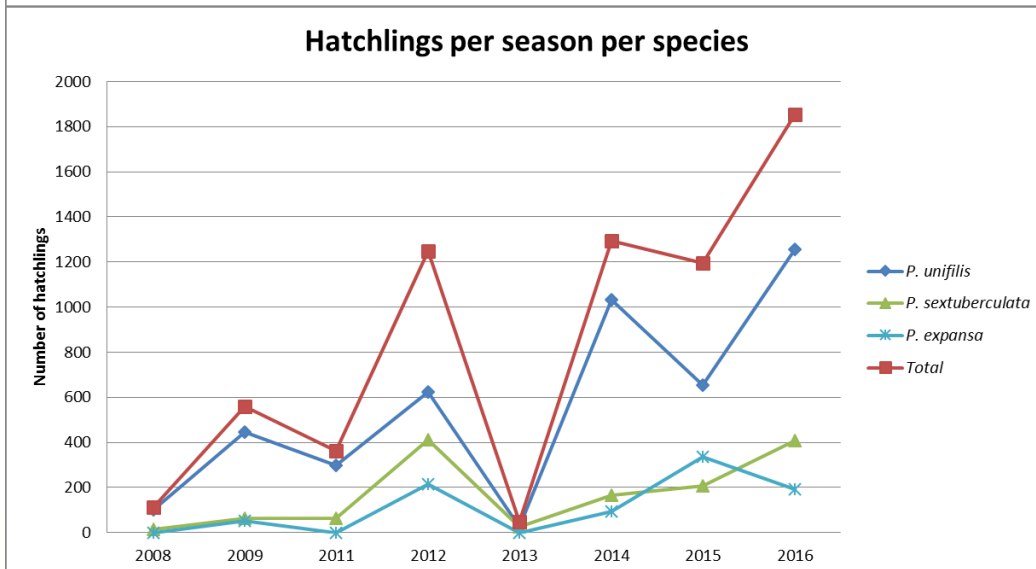
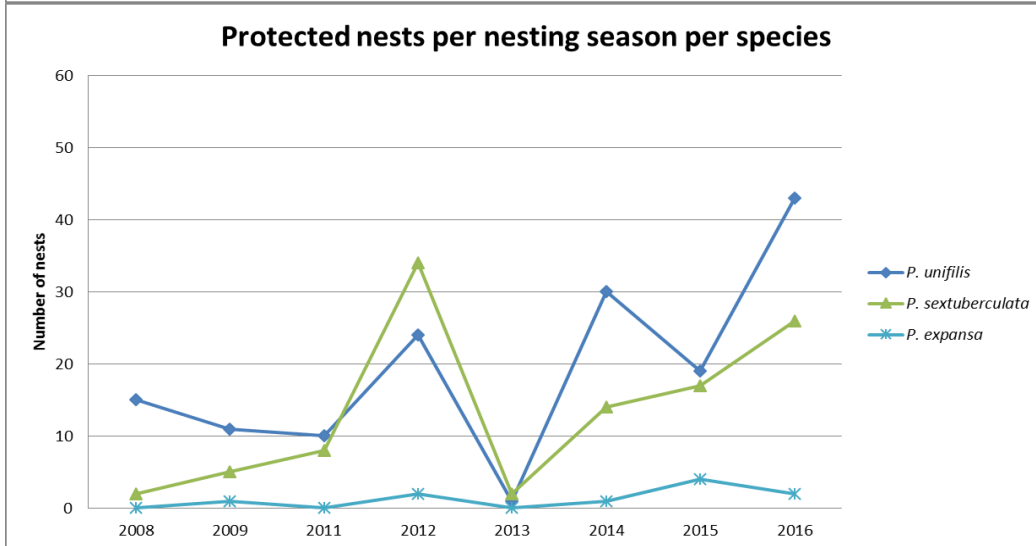
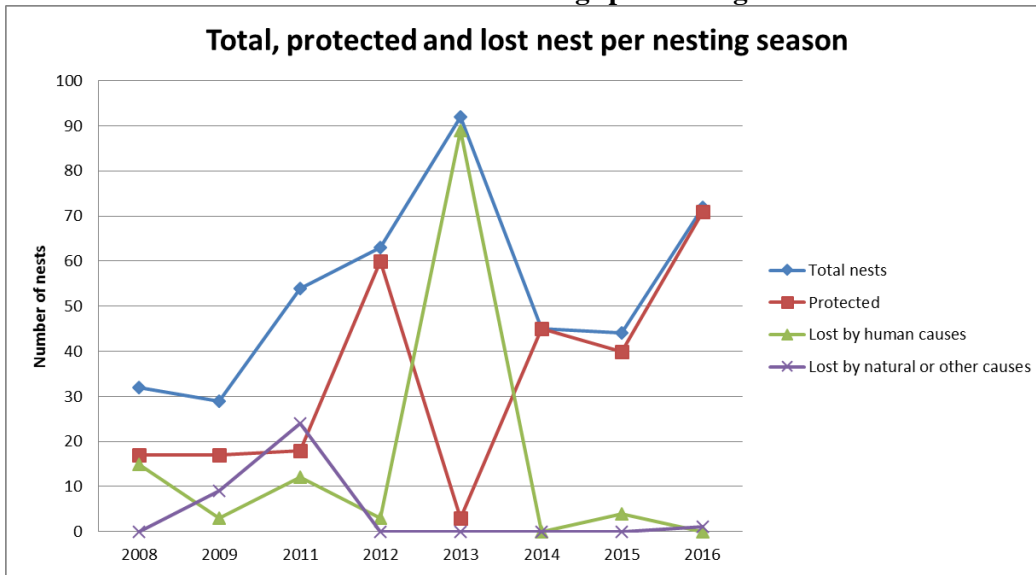
Collaboration with local organizations

Community participation reached its maximum during 2016, with six LCG (four experienced and two in formation) from five communities (three Colombian and two Peruvian), totalling 75 guardians, men and women of all ages. Relationships with neighbour communities has also improved and there is a growing respect for the work of the LCGs. Curuinsi Huasi Local Association, one of the pioneering LCGs, was in charge of the logistics coordination of the Program, and our relationship and mutual trust has increased over the years. It has also gained respect as a leading local conservation organization among the other LCGs.

The greatest achievement in terms of collaboration was the signature of a framework agreement with Corpoamazonia (the regional environmental authority), which will allow us to collaborate in turtle conservation projects and raise funds together for this program and its replication in other areas of the Amazonia. Corpoamazonia also did a small financial contribution for the 2016 season, which we hope to increase over the years.

Regarding the tourism industry, direct involvement for future funding has still not proved fruitful, although they continue to show interest in participating.

Nests and hatchlings per nesting season



Financial Status Reports for the 2015 and 2016 period

Category/Budget Item	Budgeted	Spent 2015	Spent 2016	Total	Difference
Personnel	\$ 8,069	\$ 4,407	\$ 4,193	\$ 8,600	(\$ 752)
Stipend for coordinator	\$ 1,680	\$ 246	\$ 0	\$ 246	\$ 1,434
Retribution monitors during regular nesting season	\$ 4,973	\$ 3,515	\$ 3,751	\$ 7,266	(\$ 2,956)
Retribution monitors during regular hatching season	\$ 1,080	\$ 317	\$ 442	\$ 759	\$ 763
Retribution for field coordinator	\$ 216	\$ 191	\$ 0	\$ 191	\$ 25
Retribution for environmental education team	\$ 120	\$ 138	\$ 0	\$ 138	(\$ 18)
Travel	\$ 2,848	\$ 677	\$ 1,658	\$ 2,335	\$ 734
Round trips airfare from Bogota to Leticia for project coordinator	\$ 600	\$ 427	\$ 173	\$ 600	\$ 0
Aquatic and terrestrial transport for project coordinator field trips	\$ 120	\$ 32	\$ 39	\$ 71	\$ 49
Gas, oil, grease for nesting monitoring	\$ 1,410	\$ 40	\$ 1,225	\$ 1,265	\$ 145
Gas, oil, grease for hatching monitoring	\$ 540	\$ 102	\$ 221	\$ 323	\$ 438
Gas, oil, grease for field coordinator	\$ 88	\$ 0	\$ 0	\$ 0	\$ 88
Gas for refreshment training, environmental education workshops and closure event	\$ 90	\$ 76	\$ 0	\$ 76	\$ 14
Lodging and meals	\$ 590	\$ 293	\$ 79	\$ 372	(\$ 752)
Field rate per diem (lodging and meals) for project coordinator	\$ 360	\$ 186	\$ 79	\$ 265	\$ 1,434
Snacks for refreshment training workshops	\$ 0	\$ 5	\$ 0	\$ 5	(\$ 2,956)
Snacks for environmental education workshops	\$ 150	\$ 68	\$ 0	\$ 68	\$ 763
Local food and refreshments for closure event	\$ 80	\$ 34	\$ 0	\$ 34	\$ 25
Supplies	\$ 1,768	\$ 636	\$ 1,336	\$ 1,972	(\$ 204)
Replacement small engines for experienced groups	\$ 640	\$ 481	\$ 159	\$ 640	\$ 0
Replacement small boats for experienced groups	\$ 400	\$ 0	\$ 400	\$ 400	\$ 0
Red light flashlights	\$ 0	\$ 0	\$ 67	\$ 67	(\$ 67)
Batteries for flashlights	\$ 80	\$ 0	\$ 38	\$ 38	\$ 42
Distinctive t-shirts	\$ 0	\$ 0	\$ 204	\$ 204	(\$ 204)
Distinctive badges missing	\$ 12	\$ 0	\$ 0	\$ 0	\$ 12
Impermeable digital cameras	\$ 240	\$ 99	\$ 209	\$ 308	(\$ 68)
Foam boxes	\$ 18	\$ 0	\$ 18	\$ 18	\$ 0
Hermetic impermeable bags	\$ 90	\$ 0	\$ 34	\$ 34	\$ 56
Large thick tarps for shelter on the beach	\$ 0	\$ 0	\$ 15	\$ 15	(\$ 15)
Outreach material printing (poster, flyers) for educational workshops and closure	\$ 120	\$ 0	\$ 0	\$ 0	\$ 120
Diverse monitoring materials (notebooks, labels, stationary, small tools)	\$ 0	\$ 2	\$ 100	\$ 102	(\$ 102)
Transport of materials	\$ 0	\$ 7	\$ 24	\$ 31	(\$ 31)
Communications	\$ 128	\$ 44	\$ 36	\$ 80	\$ 48
Fotocopies, printing and courier	\$ 40	\$ 3	\$ 32	\$ 35	\$ 5
Indirect costs (10%)	\$ 1,327	\$ 1,327	\$ 0	\$ 1,327	\$ 0
Grand Totals	\$ 14,602	\$ 7,340	\$ 7,266	\$ 14,606	(\$ 4)













































