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Children from the Río Caña community prepare to release a satellite-tagged hawksbill at Chiriqui Beach.

# USAID PROGRAM FOR THE MANAGEMENT OF AQUATIC RESOURCES AND ECONOMIC ALTERNATIVES

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# PROGRESS REPORT ON INDIGENOUS INVOLVEMENT IN SEA TURTLE CONSERVATION PROGRAMS IN THE COMARCA NGÖBE- BUGLÉ AND BOCAS DEL TORO PROVINCE, PANAMA

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ii      PROGRESS REPORT ON INDIGENOUS INVOLVEMENT IN SEA TURTLE CONSERVATION  
PROGRAMS IN THE COMARCA NGÖBE-BUGLÉ AND BOCAS DEL TORO PROVINCE,  
PANAMA



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## EXECUTIVE SUMMARY

The objective of this report is to provide a summary of the level of participation of indigenous community members in sea turtle conservation and monitoring programs in the Comarca Ngöbe-Buglé and Bocas del Toro Province, Panama, from 1 September, 2010 – 1 April, 2011.

## COMMUNITY PARTICIPATION

As detailed in the report entitled *'Preliminary Report on Community Participation in Sea Turtle Conservation Programs in Bocas del Toro, Panama'* (Sea Turtle Conservancy, 2010) the Sea Turtle Conservancy (STC) and other conservation organizations conducting sea turtle programs in Bocas del Toro Province and the Ngöbe-Buglé Comarca work closely with local coastal communities, to involve them in all aspects of the research, monitoring and conservation work being conducted in the region.

### SEA TURTLE MONITORING PROGRAMS IN THE COMARCA NGÖBE-BUGLÉ

All monitoring activities conducted at Chiriquí Beach during the period 1 September, 2010 – 1 April, 2011 were conducted by members of the two indigenous communities that are located at either extremity of the nesting beach. As in previous years, the Sea Turtle Conservancy (STC) worked in close collaboration with leaders of the Ngöbe-Buglé Comarca and members of the local community group, Association for the Protection of Ngöbe-Buglé Natural Resources (APRORENANB) — providing updates on the results of the monitoring and conservation program, and discussing potential solutions to continued threats to sea turtles in the Comarca.

A total of 23 people from the communities of Río Caña and Río Chiriquí were employed by STC during the timeframe of this report (See Appendix 1); including one field assistant, 11 beach monitors, eight cooks, two security guards and one boat captain. Of these, eight were women. The majority of these people were existing employees of STC, although a new beach monitor



Meeting between STC staff and community representatives from Río Caña to discuss the issue of dog predation at Chiriquí Beach.



was hired in December 2010 and two in March 2011; these people received training in all aspects of the monitoring protocol from the Research Coordinator prior to participating in program activities at the nesting beach.

In addition to the contracted personnel there were also eight community members who participated in monitoring activities at Chiriquí Beach (See Appendix 2); the majority were high school students from Río Caña who have an interest in gaining hands-on experience with sea turtles. These local volunteers play a key role in the program; once trained they work alongside the regular beach monitors and permit extra night patrols to be conducted, so increasing the number of encounters with nesting females over the course of the season.

In addition to the activities conducted at Chiriquí Beach, STC also monitors two other sea turtle nesting beaches within the Ngöbe-Buglé Comarca; Escudo de Veraguas Island and Red Beach (Playa Roja). These study sites have a different monitoring protocol and so require fewer personnel to conduct program activities; monitoring is carried out over a shorter time period during the year (May thru November), and no night patrols are conducted.



STC staff (Cristina Ordoñez and Genaro Castillo) marking a hawksbill nest on Escudo de Veraguas Island.

At Escudo de Veraguas Island one beach monitor was contracted to conduct track surveys (See Appendix 1); this man lives on the island, thereby facilitating the daily survey protocol and reducing fuel expenses. At Red Beach three people from the community located at the beach were employed; two men and one woman (See Appendix 1). These four people were newly contracted in May 2010; they received training and participated in

supervised surveys with STC Research Coordinator (RC), Cristina Ordoñez, and Field Assistant (FA), Genaro Castillo, prior to conducting monitoring activities

unsupervised. The RC and/or FA also provide continual supervision to staff at these two beaches during site visits very two weeks throughout the monitoring period (May – November).

## SEA TURTLE MONITORING PROGRAMS IN BOCAS DEL TORO PROVINCE

Members of several other indigenous coastal communities participate in turtle conservation projects at other nesting beaches in Bocas del Toro province, that are outside the Comarca.



In early 2011, the RC held several meetings with members of the community of Bluff Beach (Playa Bluff) who had expressed an interest in conducting sea turtle monitoring and conservation activities at the local beach. Since 2010, STC has been in discussion with the community to try and establish a more formal sea turtle conservation and monitoring program; and there exists local support for such collaborative efforts. In previous years STC staff had supported somewhat sporadic monitoring activities at this beach, but the objective of the meetings in 2011 was to assess the feasibility of establishing a more coordinated program of activities, to better evaluate turtle populations utilizing this nesting beach.

Another aim of STC is to develop a community-run ecotourism initiative at this site, that will provide an alternative economy of the local community and hopefully raise funds to support sea turtle conservation and protection measures in Bocas del Toro, in conjunction with MAREA project partner Solimar International.

On 25 January, 2011, four members of Bluff Beach community met with the RC. During this meeting they informed her about the local organization that had been established by the community; Asociación Natural Bocas Carey (ANABOCA); Bocas Hawksbill Association was created specifically to support sea turtle protection efforts at Bluff Beach. The association has been authorized by the local government in Bocas del Toro as the official entity charged with protecting the natural resources (including sea turtles) of Bluff Beach Municipal Protected Area. At present Bluff Beach is not awarded any protected status, but it is the hope of STC and other interested stakeholder groups that it can be declared an official Municipal Protected Area within the near future; this would provide for the enforcement of national laws that protect sea turtles and their habitats at this important nesting beach.

On 5 February, 2011, a further meeting was held with 18 people from the community to define the activities related to the monitoring and research of sea turtles at Bluff Beach prior to the start of nesting season.

The RC conducted a training workshop for interested members of Bluff Beach on 25 – 26 February and 2 March, 2011. A total of 15 people participated in the workshop over the course of the three different days. Details about workshop participants are detailed in the report entitled “*Progress Report on Environmental Education and Outreach Activities in the Comarca Ngöbe-Buglé and Bocas del Toro Province, Panama*” (Sea Turtle Conservancy, 2011). The workshop agenda is summarized in Appendix 3; participants received information about the reproductive biology of sea turtles, principal threats to sea turtles in the region and sea turtle species identification.



In addition to the theoretical presentations they also received practical training in monitoring techniques including the correct procedure for flipper tag application, collection of biometric data from nesting females, and nest marking. The RC also led a night patrol to supervise workshop participants while they familiarized themselves with the different aspects of the monitoring protocol.



Workshop participants practicing nest relocation at Bluff Beach, February, 2011

Following the training workshop in February and March, nine people (eight men and one woman) have been involved in coordinating daily track surveys and night patrols at Bluff Beach, with the support of STC staff (See Appendix 4).

At present these activities are being conducted on a volunteer basis, but it is hoped in the future that revenue from eco-tourism at the beach will provide sufficient funds to contract seasonal beach monitors.

## INDIGENOUS PARTICIPATION IN NATIONAL AND INTERNATIONAL EVENTS

From 25 – 27 September, 2010, STC staff Dr. Emma Harrison, Cristina Ordoñez, Genaro Castillo (Río Caña), and several members of indigenous coastal communities who are involved in sea turtle conservation projects in Bocas del Toro province and the Ngöbe-Buglé Comarca, were invited to participate in the 3<sup>rd</sup> National Exchange of Experiences between Sea Turtle Managers organized by the Panamanian Environmental Authority (ANAM), and sponsored by the Mesoamerican Biological Corridor (MBC). The objective of the workshop was to allow community members (predominantly from indigenous communities throughout Panama) to share experiences of sea turtle conservation and monitoring in their region, with additional input and advice provided by invited international sea turtle biologists.

The workshop was not organized and hosted by STC, so we can not report on all of the participant; however, four community members from Bocas del Toro attended the meeting in Tonosi, on the Pacific coast of Panama: Genaro Castillo (Chiriquí Beach), Arcelio Gonzalez (Long Beach), Huascar Miller (Sixaola Beach and the Zapatilla Cays) and Ruben Santos (Soropta Beach). Each person had the opportunity to speak about their personal experiences with sea turtles, and how they had become involved in their local monitoring or conservation project. During the workshop participants also had the opportunity to take part in a night tour at a nearby olive ridley (*Lepidochelys olivacea*) nesting beach and provide feedback to the local community association about their tourist activities.



Each year for the past five years, at least one indigenous member of STC’s sea turtle monitoring team at Chiriqui Beach has traveled to the International Symposium on Sea Turtle Research and Conservation to present an oral presentation or poster describing the work being done on the project and the participation of the local community. This year’s Symposium took place in San Diego, CA, and Rio Chiriqui beach surveyor Silverio Juarez attended (*photo at right shows the STC staff at the Symposium with Silverio on the left*).



## ENVIRONMENTAL EDUCATION AND OUTREACH

The environmental education and outreach activities conducted by STC staff from 1 September, 2010 – 1 April, 2011 will be discussed in detail in a separate report to USAID.

## CONCLUSIONS

Active participation of indigenous community members in sea turtle conservation and monitoring programs in Boca del Toro Province and the Ngöbe-Buglé Comarca continued from 1 September, 2010 – 1 April, 2011.



Community members from the Comarca Ngöbe-Buglé and Bocas del Toro Province participate in a national workshop, September 2011

More than 35 people from coastal indigenous communities have been involved in sea turtle monitoring and conservation programs in the region during this time period; the majority as paid beach monitors.

Fifteen people, all but two residents of Bluff Beach community, participated in a training workshop, receiving theoretical and practical training about sea turtles and field monitoring techniques for nesting beaches.

Four community members from Bocas del Toro Province and the Comarca Ngöbe-Buglé participated in a national workshop for indigenous people involved in sea turtle research and conservation; Genaro Castillo



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(Chiriquí Beach), Arcelio Gonzalez (Long Beach), Huascar Miller (Sixaola Beach and the Zapatilla Cays) and Ruben Santos (Soropta Beach).

STC recognizes that the continued involvement of local people from the coastal communities that are adjacent to sea turtle nesting, foraging and migration habitat is vital to ensure the continued success of conservation initiatives in Bocas del Toro. By helping to develop a sense of community ownership and pride in conservation and monitoring projects, it is hoped that current threats to sea turtles and their habitats in the area can be reduced. STC is committed to raising awareness and building local capacity in Bocas del Toro to ensure the continued survival of globally important sea turtle populations that occur in the area.

## RECOMMENDATIONS

STC will continue to work with indigenous communities within the Comarca Ngöbe-Buglé and Bocas del Toro Province, to actively involve interested community members in sea turtle programs in the region. The objective is to foster a conservation ethic among local people to ensure the long-term survival, not only of sea turtle populations but also other endangered natural resources.

Environmental education is key to the success of any conservation program, and STC will continue to develop an educational program for students in coastal communities in the Comarca and Bocas del Toro Province, to raise awareness, particularly among the younger generation, about threats to sea turtles, their habitats and other endangered species in the region.

Working with partners from the Program for the Management of Aquatic Resources and Economic Alternatives, STC aims to build capacity in the area, not only in sea turtle research and monitoring techniques, but also to help local communities develop possible ecotourism initiatives to promote the conservation of threatened sea turtles, and also generate income.

## BIBLIOGRAPHY

Sea Turtle Conservancy, 2010. *'Preliminary Report on Community Participation in Sea Turtle Conservation Programs in Bocas del Toro, Panama.'* Unpublished report submitted to USAID. Pp. 23.

Sea Turtle Conservancy, 2011. *'Progress Report on Environmental Education and Outreach Activities in the Comarca Ngöbe-Buglé and Bocas del Toro Province, Panama.'* Unpublished report submitted to USAID. Pp. 15.



# APPENDICES

## APPENDIX 1. LIST OF INDIGENOUS COMMUNITY MEMBERS EMPLOYED BY SEA TURTLE CONSERVANCY FROM 1 SEPTEMBER, 2010 – 1 APRIL, 2011.

Name	Position	Gender	Employment history	
			Start date	End Date
	Field Assistant CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	To date
	Beach Monitor CB	Male	Sep 2010	Dec 2010
	Beach Monitor CB	Male	Sep 2010	Nov 2010
	Beach Monitor CB	Male	Dec 2010	Dec 2010
	Beach Monitor CB	Male	Mar 2011	To date
	Beach Monitor CB	Male	Mar 2011	To date
	Beach Monitor EdV	Male	Sep 2010	Nov 2010
	Beach Monitor RB	Male	Sep 2010	Nov 2010
Beach Monitor RB	Male	Sep 2010	Oct 2010	

CB = Chiriquí Beach; EdV = Escudo de Veraguas Island; RB = Red Beach



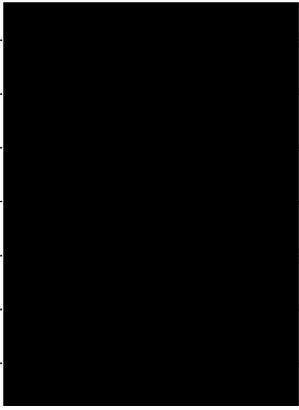
APPENDIX 1. CONTINUED

Name	Position	Gender	Employment history	
			Start date	End Date
[REDACTED]	Beach Monitor RB	Female	Sep 2010	Oct 2010
	Boat Captain	Male	Sep 2010	To date
	Cook CB	Female	Sep 2010	To date
	Cook CB	Female	Sep 2010	To date
	Cook CB	Female	Sep 2010	To date
	Cook CB	Female	Sep 2010	To date
	Cook CB	Female	Sep 2010	Nov 2010
	Cook CB	Female	Sep 2010	Nov 2010
	Cook CB	Female	Feb 2011	To date
	Cook CB	Female	Feb 2011	To date
	Guard CB	Male	Sep 2010	Nov 2010
	Guard CB	Male	Feb 2011	To date

CB = Chiriquí Beach; EdV = Escudo de Veraguas Island; RB = Red Beach



**APPENDIX 2. LIST OF COMMUNITY VOLUNTEERS WHO  
REGULARLY PARTICIPATE IN MONITORING ACTIVITIES AT  
CHIRIQUÍ BEACH.**

<b>Full Name</b>	<b>Gender</b>	<b>Community</b>
	Male	Río Caña
	Male	Middle Beach
	Male	Middle Beach



### APPENDIX 3. SUMMARY OF SEA TURTLE TRAINING WORKSHOP AGENDA.

Day 1	
Activity	Objective(s)
Welcome activity	<ul style="list-style-type: none"> <li>• Presentation of workshop participants and review of agenda</li> </ul>
Introduction to sea turtles	<ul style="list-style-type: none"> <li>• Presentation about the history of sea turtles; including information about their social, cultural and economic importance in the region</li> </ul>
Sea turtle biology	<ul style="list-style-type: none"> <li>• Presentation about the life cycle and reproductive behaviour</li> </ul>
Species of sea turtles	<ul style="list-style-type: none"> <li>• Description of the different sea turtle species, with a focus on species found in Panama</li> </ul>
Threats	<ul style="list-style-type: none"> <li>• Presentation about the various threats to sea turtles in feeding sites, reproductive areas, migratory routes and nesting beaches</li> </ul>
Importance of Panama to sea turtles	<ul style="list-style-type: none"> <li>• Discussion of the key role that Panama plays for different life stages of sea turtles</li> </ul>
Question and Answer session	<ul style="list-style-type: none"> <li>• Opportunity for workshop participants to ask questions relating to materials discussed during the first day of the workshop</li> </ul>
Day 2	
Conservation, protection and research	<ul style="list-style-type: none"> <li>• Theoretical presentation about methods used to research, protect and conserve sea turtle populations</li> </ul>
Monitoring Protocol 1	<ul style="list-style-type: none"> <li>• Introduction to survey methods, including identification of tracks of different species of sea turtles and differentiation between nests and false crawls</li> </ul>
Monitoring Protocol 2	<ul style="list-style-type: none"> <li>• Description of field techniques including data sheets, flipper tagging, biometric data collection and nest marking</li> </ul>
Nest manipulation	<ul style="list-style-type: none"> <li>• Introduction to nest relocation, hatcheries and hatchling release</li> <li>• Protocol for nest excavations</li> </ul>
Question and Answer session	<ul style="list-style-type: none"> <li>• Questions relating to day 2 activities</li> </ul>

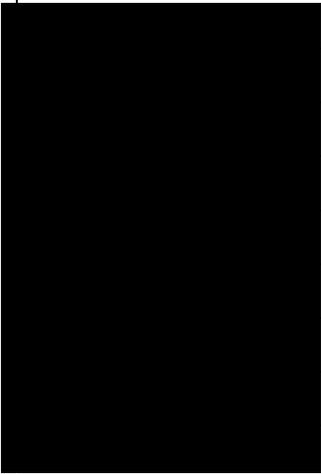


APPENDIX 3. CONTINUED.

Day 3	
Activity	Objective(s)
Review session	<ul style="list-style-type: none"><li>• Review of all material discussed during first two days of the workshop</li></ul>
Practical training session	<ul style="list-style-type: none"><li>• Training sessions on the beach; including identification of tracks, nest marking, nest relocation for different species of turtle, biometric data collection (using turtles created with sand) and recording of data on data sheets</li></ul>
Question and Answer session	<ul style="list-style-type: none"><li>• Opportunity to raise any concerns about any aspect of the workshop</li></ul>
Supervised night patrol	<ul style="list-style-type: none"><li>• To practice all field methods, especially application of flipper tags, biometric data collection and nest marking</li></ul>



**APPENDIX 4. LIST OF INDIGENOUS COMMUNITY MEMBERS  
PARTICIPATING IN SEA TURTLE MONITORING ACTIVITIES AT  
BLUFF BEACH, 14 FEBRUARY – 1 APRIL, 2011.**

Name	Position	Gender	Employment history	
			Start date	End Date
	Beach Monitor	Male	Feb 2011	To date
	Beach Monitor	Male	Feb 2011	To date
	Beach Monitor	Male	Feb 2011	To date
	Beach Monitor	Male	Feb 2011	To date
	Beach Monitor	Female	Feb 2011	To date
	Beach Monitor	Male	Feb 2011	To date
	Beach Monitor	Male	Feb 2011	To date
	Beach Monitor	Male	Feb 2011	To date
	Beach Monitor	Male	Feb 2011	To date