

# Conservation Progress in the Bijagós Archipelago, Guinea-Bissau

By BETÂNIA FERREIRA AIRAUD, AISSA REGALLA, CASTRO BARBOSA, and DOMINGOS BETUNDE



A tropical country known for its parks and protected areas, Guinea-Bissau lies on the west coast of northern Africa. As part of the country's efforts to inventory and catalog areas of high conservation importance, biodiversity surveys were conducted there in the 1990s, particularly in the Bijagós Archipelago. The preliminary surveys found important nesting areas for green turtles as well as shallow marine areas with turtle foraging and mating grounds, which together were the main criteria for creation of two protected areas in 2000: João Vieira and Poilão Marine National Park, plus Orango National Park.

Since its creation in 2004 by the government of Guinea-Bissau, the Institute of Biodiversity and Protected Areas (IBAP) has met considerable success in its mission to protect sea turtles in the Bijagós Archipelago. IBAP has begun implementing a National Action Plan for the Conservation of Sea Turtles, with assistance from international partners, and has undertaken the monitoring and protection of green

turtles that nest in João Vieira and Poilão Marine National Park and in Orango National Park.

Five sea turtle species have been confirmed in the Bijagós Archipelago, namely green, olive ridley, leatherback, hawksbill, and loggerhead. The green turtle nesting population is of particular interest internationally. Approximately 40,000 green turtle nests were laid on

the island of Poilão during the 2014 nesting season with more than 1,000 nesting attempts recorded on several nights. Although Poilão is the most important rookery for green turtles, hundreds or perhaps thousands of nests are laid on other islands in the Bijagós Archipelago and on the continental beaches of Guinea-Bissau.

The olive ridley is the second most abundant sea turtle in Bijagós, nesting mostly on the beaches of Orango National Park. In the 1990s, frequent surveys of the most important beaches in this park were carried out, and it was estimated that they hosted between 170 and 620 nests annually, although the estimates have declined to around 90 nests annually since 2012. A few dozen hawksbill and leatherback nests are also found every year on the island of Poilão, and in the Orango islands. Loggerheads are very rare in Guinea-Bissau, but a few loggerhead carapaces have been found in Bijagós, and they have also been observed near the Unhocozinho Islands. Whether this species nests in Guinea-Bissau is uncertain. Satellite tracking of nesting loggerheads in Cape Verde has revealed that some animals come to those waters to feed; therefore, Guinea-Bissau may be solely part of the loggerheads' nonbreeding habitat.

Integrating local communities into conservation efforts is a particular challenge in Guinea-Bissau because of the great diversity of ethnic groups, each with different cultural rules, customs, and beliefs with regard to sea turtles. Although not commercialized, sea turtles are still commonly poached for traditional purposes. Before the 1990s, harvesting of eggs and nesting females was widespread and likely affected a sizable proportion of the country's sea turtles. One notable exception to this pressure was Poilão Island, a remote site that is considered sacred in the traditional beliefs of the Bijagó people. The island is uninhabited and only occasionally visited for ceremonies. For the past 10 years, it has benefited from the presence of park rangers and researchers. As a result, the island's nesting females and eggs are safe from human predation.

Converting turtle poachers and fishers into turtle patrollers and monitors is one of IBAP's main strategies and one of its greatest challenges.

Several traditions relate to sea turtle harvest among the people of Guinea-Bissau. For example, in the north, the Balantas and Felupes people do not eat sea turtle meat or eggs, especially of leatherbacks and green turtles, because they are considered sacred animal spirits.

The nearby Serrereres people also believe that leatherback meat can cause a disease comparable to leprosy. Where they exist, such native taboos provide a measure of protection for sea turtles.

In contrast, farther to the south—in the region occupied by the Tandas, Nalus, and Susos people—sea turtle meat and eggs are still consumed. And in the Bijagós Archipelago, sea turtles are a very important food source and figure prominently in the ancestral and traditional rituals and celebrations of the Bijagó people. For example, the carapaces of sea turtles are used during the Fanado ritual (a ceremonial rite of passage) as an offering and sign of respect for elders



(called *Metenaque*), whereby young men (called *Camabis*) make an offering of a sea turtle in order to seek the protection of the *Metenaque* and the continuity of the *Camabis*' education. Sea turtles are an important component in other proclamation ceremonies and sacred rituals in which community elders offer a turtle to their sacred spirit and ancestors to thank them and to ask for more turtles. As part of the ceremony, the *Metenaque* consume the head, heart, stomach, and sexual organs of the turtle offerings, accompanied by palm wine.

Outside of such traditional ceremonies, the capture of sea turtles by the Bijagó people is rare. But when they do kill turtles, they use the meat and eggs, as well as the skin of the leatherback turtle. Turtle fat is rendered for cooking oil or massage oil for newborns, and turtle bones, eggs, and fat are used in traditional medicine as analgesics or to treat infertility in men and woman. Turtle carapaces are also commonly used as containers for domestic use, and eggshells are used as agricultural fertilizers.

Converting turtle poachers and fishers into turtle patrollers and monitors is one of IBAP's main strategies and one of its greatest challenges. Conservationists realized early on that the integration of coastal communities would be essential to achieving the country's long-term conservation goals, because Guinea-Bissau's national parks have communities within their boundaries that depend on the natural resources there, sometimes using the same species and resources that are targeted for protection.

IBAP now involves local communities in all decision-making processes in the national parks, including delineating the parks' rules. Local traditions and beliefs are always respected and taken into account when designing management interventions. For example, most traditional sacred sites are key areas targeted for preservation in the national parks, and whenever local ethnic groups want to use a sea turtle or other protected species for their ceremonies, they are given authorization to do so by the park authorities. All staff members for the protected areas are chosen from within the local communities, which builds good relationships and instills confidence among the parks' many stakeholders.

Although sea turtle poaching is still a reality in Guinea-Bissau, community participation and levels of awareness have increased considerably in the past years, and we remain hopeful for the future of sea turtles in our country. We think that by creating well-managed protected areas, by strengthening community participation, and by turning local people into monitoring agents and spokespeople in their communities, we will be able to create a resilient monitoring and protection network and to improve the conservation status of sea turtles in the Bijagós Archipelago for the long term. ■

THIS PAGE: On the island of Poilão in Guinea-Bissau, rangers from João Vieira and Poilão National Park tag an olive ridley turtle that was rescued after being tangled in a fishing net. © BETÂNIA FERREIRA AT LEFT: A local resident and ranger at João Vieira and Poilão National Park releases green turtle hatchlings on the island of Poilão in Guinea-Bissau. © J. F. HELIO AND N. VAN INGEN