

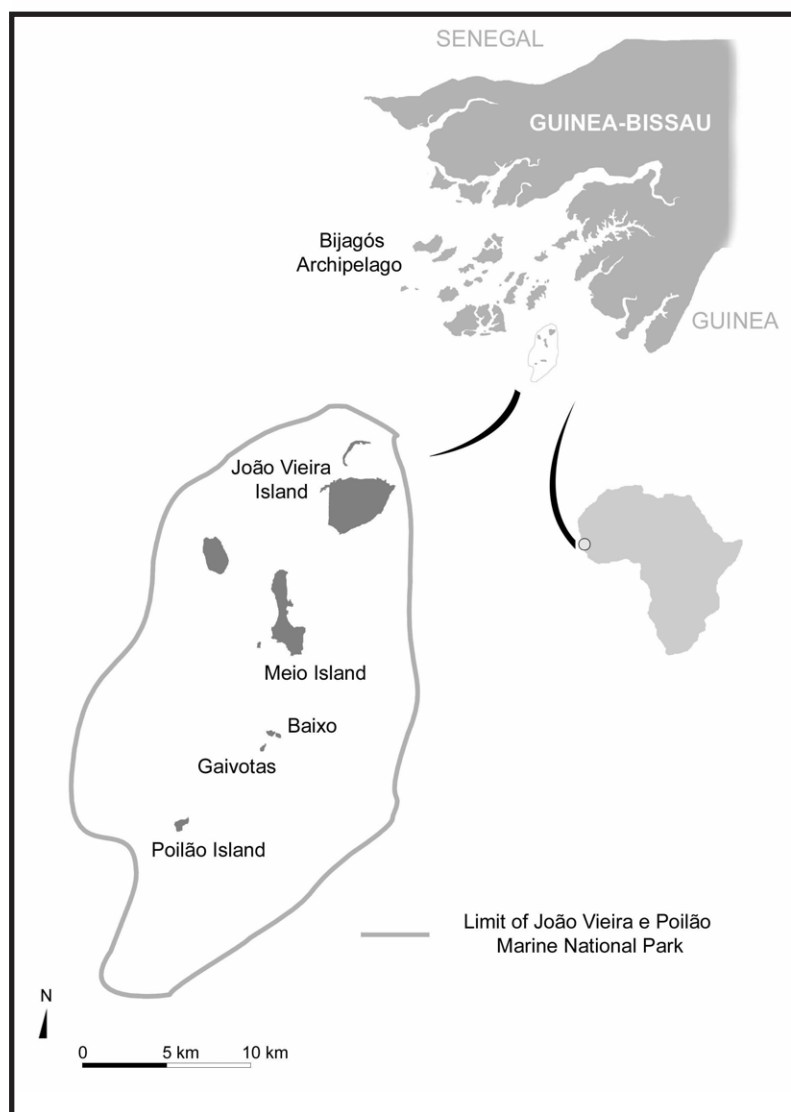
## METHODOLOGY

### Personnel:

Project co-ordination was undertaken by: **Castro Barbosa** BSc (Coastal Planning Office, Bissau); **Annette Broderick** PhD (Marine Turtle Research Group); **Paulo Catry** PhD (IUCN Guinea-Bissau and Unidade de Investigação em Eco-Etologia, Instituto Superior de Psicologia Aplicada, Portugal); **Brendan Godley** PhD (Marine Turtle Research Group); **Graeme Hays** PhD (School of Biological Sciences, University of Wales); **Alfredo Simão da Silva** MSc (Director of the Coastal Planning Office, Bissau). Field work was carried out by **Castro Barbosa**, **Paulo Catry** and **Brendan Godley** (above) and: **Amadeu Almeida** BSc (Centre for Applied Research on Fisheries); **Bucar Indjai** BSc (National Institute for Research); **Januário da Silva** (Canhabaque); **Preto João Perrida** (Canhabaque).

### Study site:

The island of Poilão is the southernmost and one of the smallest (43 ha) of the Bijagós Archipelago, Guinea Bissau ( $10^{\circ} 36' - 11^{\circ} 37'N$ ,  $15^{\circ} 36' - 16^{\circ}, 29'W$ ; West Africa; Figure 1). It is covered by undisturbed tropical forest and surrounded by a rocky subtidal zone. Sandy beaches comprise a total of 2.3 km of the ca. 4 km coastline. The climate is tropical, with a rainy season (May-November). The nesting biology of this population has been more fully elaborated in Catry *et al.* (2002).



**Figure 1.** Location of Poilão Island within the João Vieira and Poilão National Marine Park in Guinea Bissau, West Africa (after Catry *et al.* 2002).

## Fieldwork:

Between 17<sup>th</sup> November and 2<sup>nd</sup> December 2001 Drs. Godley and Catry were in Guinea Bissau carrying out field work in conjunction with IUCN and the consortium of individuals and organisations (GPC, INEP, CIPA, BBR) who undertake the ongoing turtle monitoring and conservation work at Poilão. The project team and field camp are shown below:



**Left:** Field team. Back Row: Paulo Catry (IUCN, ISPA), Januário da Silva (Canhabaque), Preto João Perrida (Canhabaque), Amadeu Almeida (CIPA), Front Row: Castro Barbosa (GPC), Bucar Indjai (INEP). **Right:** Field camp in forest behind main nesting beach.

Satellite transmitters were attached to the carapace of 10 female green turtles. We utilised two models: six Telonics ST-18 Platform Terminal Transmitters (PTTs) and four Telonics ST 6 PTTs (see photos below). The carapace was first cleaned using mildly abrasive sandpaper, then wiped with acetone to remove natural oils. Where possible carapace measurements were taken (standard curved carapace length (CCL) and width (CCW) in cm). The PTTs were attached using a two part epoxy resin (Foilfast, SFS Stadler, Cheltenham, UK) according to a methodology used previously (Godley *et al.* 2002). Attention was paid to make attachment package hydrodynamic to minimise drag (Watson and Granger 1998). Transmitters were tracked using the Argos system resulting in fixes of variable accuracy (Argos 1996). All field team members were trained in attachment.



**Left:** Castro Barbosa with ST-18 and ST-6 in his right and left hands, respectively. **Right:** Green turtle returning to sea following ST6 attachment.

## Additional Studies

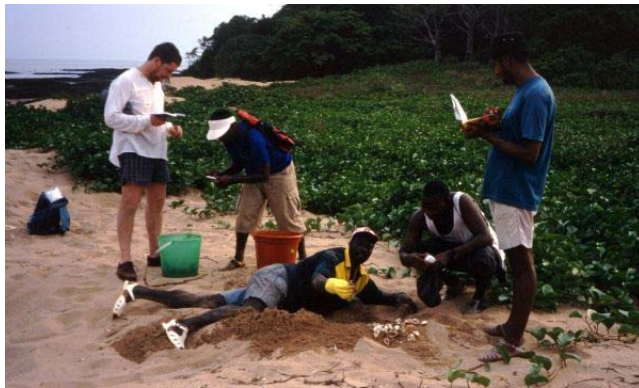
During the field visits, the following additional work was undertaken.

### Deployment of Temperature Logging Devices

To give long term insights into thermal regimes being experienced in nests at Poilão, two ‘Tinytalk’ data loggers (Gemini Data Loggers (UK) Ltd., Chichester, UK) which were set to record synchronously at 4 hour intervals were buried at nest depths at two control sites. When local partners retrieve these, an annual nest temperature profile can be estimated.

### Sampling for Molecular Ecological Studies

Vouchers (skin biopsy or dead hatchling) were collected representing 50 individual turtles. These were given to Angela Formia/Mike Bruford of the University of Cardiff who are currently studying the molecular ecology of marine turtles throughout West Africa. As part of this major study these samples will greatly contribute towards a regional understanding of the biology of this species.



**Left:** Excavating a hatched nest to obtain information on nest success and a voucher for analysis.



**Right:** Females may become trapped in rockpools after nesting and await rising tides.