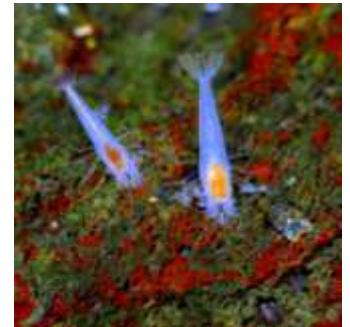




Developing Ascension Island's first National Biodiversity Action Plan



Prioritisation: we can't action plan for everything!

Selection criteria for BAP:

- 1** The species is **endemic to Ascension Island**.
- 2** The species is **threatened globally** according to the *IUCN Red List of Threatened Species*, and/or appears in the Appendices of multilateral environmental agreements (MEAs) ratified by the United Kingdom, including CITES and the Bonn Convention.
- 3** Ascension Island supports a **significant proportion of the global or regional population** for at least some stage in its life cycle.
- 4** **Invasive species with known detrimental effects on native and endemic species**, based on evidence from Ascension Island or elsewhere in the world.

[**Caveat.** Enough is known about threats and biology to practically action plan.]



In addition, **habitat action plans** are being prepared for all major 'ecoregions' and unique habitat types.



Guiding Principles

Process should be inclusive from the outset, involving all relevant stakeholders.

SAPs should gather relevant information together in a visually appealing and user friendly format, and be accessible to non-specialist readers.

Proposed actions should be SMART (Specific, Measurable, Achievable, Relevant and Time-limited), but not exclude on-going work programmes

Actions should be aligned with the Aichi Targets and other relevant MEAs

There should be a clear monitoring framework in place to measure progress. We don't want this document to gather dust!



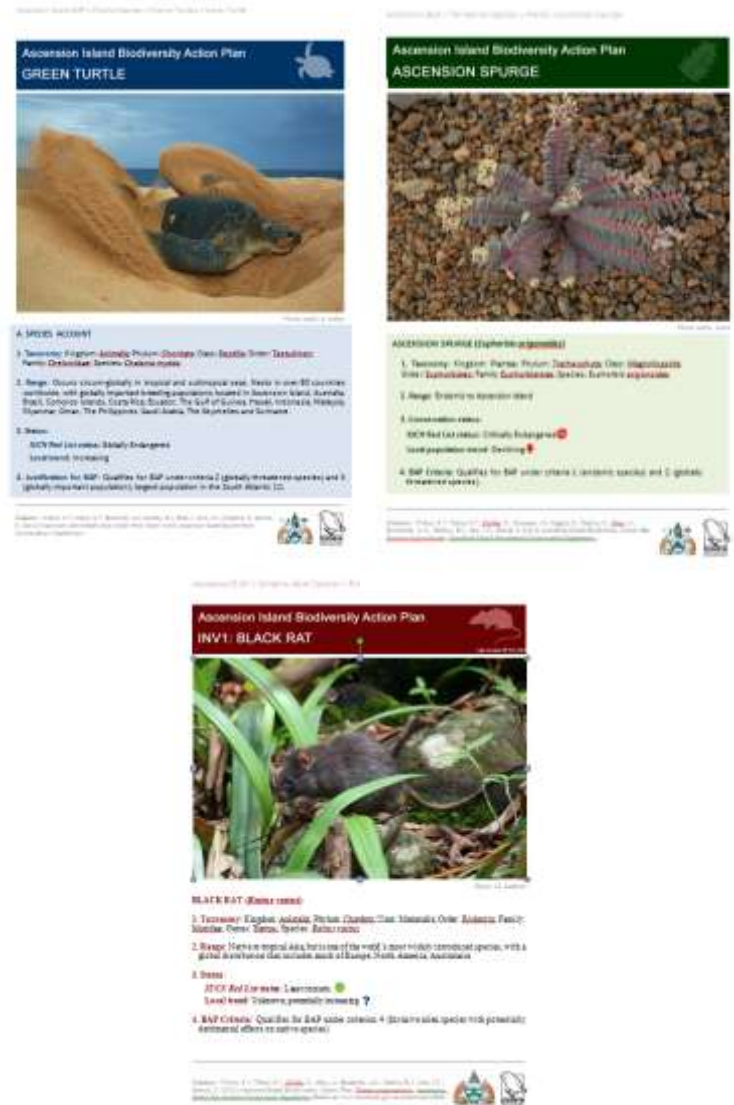
Structure of the BAPs

Based on the Cayman Islands BAP (see <http://www.doe.ky/nbap/>)

BAP is divided into marine, terrestrial and invasive species SAPs and HAPs.

Each SAP consists of two main sections:

- Species Account
- Action Plan



Species Account



Photo credit: S. Webster

A. SPECIES ACCOUNT

1. **Taxonomy:** Kingdom: Animalia; Phylum: Chordata; Class: Reptilia; Order: Testudines; Family: Cheloniidae; Species: *Chelonia mydas*
2. **Range:** Occurs circum-globally in tropical and subtropical seas. Nests in over 80 countries worldwide, with globally important breeding populations located in Ascension Island, Australia, Brazil, Comoros Islands, Costa Rica, Ecuador, The Gulf of Guinea, Hawaii, Indonesia, Malaysia, Myanmar, Oman, The Philippines, Saudi Arabia, The Seychelles and Suriname.
3. **Status:**
IUCN Red List status: Globally Endangered
Local trend: increasing
4. **Justification for BAP:** Qualifies for BAP under criteria 2 (globally threatened species) and 3 (globally important population); largest population in the South Atlantic [1].



General information on taxonomy and range.

Global (IUCN) and local status

Qualifying BAP Criteria

Species Account

Ascension BAP: Green Turtle



5. Ecology:

Habitat and diet: Green turtles occupy different habitats during different life stages. Adults are predominantly herbivorous and undertake cyclical, long-distance migrations between coastal feeding habitats and nesting sites, which are often located on oceanic islands. Green turtles nesting at Ascension Island forage along a 6000 km stretch of coastline from northern Argentina to northern Brazil [2,3]. Hatchlings are pelagic and are thought to associate with floating vegetation and other debris entrained in ocean currents [4].

Reproduction and life history: Green turtles nest on sandy marine beaches. Females lay an average of 6 clutches of 120 eggs within a nesting season and breed at intervals of 3-4 years [5,6]. Sex is determined by nest temperature during the middle third of incubation, with a pivotal temperature (giving an equal sex ratio) of 28.8°C [7]. Hatchlings emerge 45 – 60 days after nesting, normally at night, and disperse rapidly into the open ocean. Juveniles join adults in the Brazilian coastal feeding grounds at a carapace length of approximately 30 cm and are estimated to reach maturity at 17 – 35 years of age [8].

Population structure: Green turtles tend to breed at their natal nesting sites resulting in reproductive isolation among nesting populations [9]. The Ascension Island population is genetically distinct from other Atlantic populations [9] and there is evidence of local divergence between turtles nesting at east coast and west coast beaches [10], although local genetic structure appears to be weak [11,12].

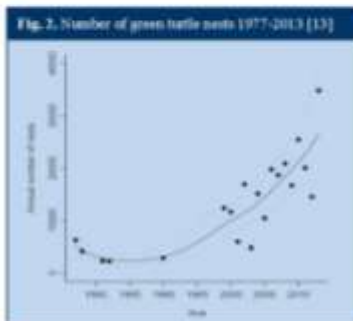
6. Local Distribution:

Green turtle nesting at Ascension Island occurs between December and June on numerous sandy beaches and coves located along the western, northern and north-eastern coastlines (Fig 1). Approximately 75% of nesting occurs on three primary beaches: Long Beach, Pan Am Beach and North East Bay (Fig. 1) [13]. Sites of secondary importance include Deadman's Beach and Clarke's Beach. During the mating season (Nov – Mar), large aggregations of mating turtles can be found in shallow, inshore waters, particularly adjacent to the primary nesting beaches [14]. Females remain in coastal habitats during the intervals between nesting events, typically resting at depths shallower than 20 m [15].



7. Local Status:

Following the discovery of Ascension Island in the 16th century, the green turtle population was subjected to centuries of intensive exploitation for meat, resulting in a severe depletion of the population [1,16]. Harvesting had largely ceased by the 1940s [16], and, since monitoring began in the 1970s, estimated annual numbers of green turtle nests have increased 6-fold from approximately 3750 to more than 23,000 [13]. The status of the population is therefore currently considered to be favourable.



Synopsis of biological data. Concisely summarises relevant literature needed to place the action plan in context.

Standardised distribution map and description of local occurrence.

Elaborate on local status, summarising available information on historical and contemporary population trends.

Species Account

Ascension IAP: Green Turtle



8. Legal:

The green turtle is protected under both domestic legislation and multilateral environmental agreements that have been ratified by the UK and extended to its Overseas Territories:

- Listed under Appendix I of CITES (commits parties to adopt legislation prohibiting the import of export of listed species without license from local scientific and management authorities).
- Listed under Appendix I of the Convention on Migratory Species (commits parties to conserving and restoring the habitats of listed species [Article III, para. 4a], minimising activities that impede their migration [Article III, paragraph 4b] and prohibiting the taking of those species [Article III, para. 5]).
- Listed on the Schedule of the Wildlife Protection Ordinance, 2013 (prohibits the killing, capture or taking of turtles or their eggs at Ascension without license).

Note: Although provisions for implementing CITES locally are contained within the Endangered Species (Ascension) Control Ordinance 1967 this legislation has been highlighted as inadequate and in need of updating by Defra.

9. Associated Species Action Plans (SAPs) and Habitat Action Plans (HAPs)

Associated SAPs	Associated HAPs
Hawksbill Turtle (click to view)	Pelagic (click to view)
Black Rat (click to view)	Shallow Marine (click to view)
Tree Tobacco (click to view)	
Mexican Thorn (click to view)	

10. Current Threats

❗ **Climate change:** Temperature-dependent sex determination makes marine turtles highly susceptible to climate change as increasing incubation temperatures may result in male-deficient sex ratios, as well as reducing hatching success. The primary sex-ratio at Ascension Island is already estimated to be 75% female [7], and sand temperatures on some east coast beaches are close to the thermal limits for development during much of the nesting season [10]. In addition, rising sea levels threaten to encroach on nesting habitat and may increase the risk of tidal inundation of nests. Sea level at Ascension Island has risen by approximately 7 cm since 1955 [17], and sand temperatures have increased by an estimated 0.5°C over the past 100 years [18].

❗ **Conflicts with fisheries:** Although less common in green turtles than in other species of marine turtle, incidental capture in fishing gear is still a major source of mortality globally and in the south-western Atlantic [19–21]. Given the small size and recreational nature of the domestic fishing fleet, fisheries conflicts are most likely to occur in the South American feeding grounds and with commercial long line and drift net vessels operating along migratory routes [19,21]. A small number of licensed long-liners operate within Ascension Island's territorial waters, but the level of illegal fishing activity and extent of marine turtle bycatch is currently unknown. Entanglement in discarded fishing tackle and collisions with motor craft may constitute additional minor threats locally.

❗ **Degradation of nesting habitat:** Threats to nesting habitat are associated with erosion, sand mining, invasive plant species, building and light pollution.

Summary of existing legal instruments relevant to species, including MEAs and local legislation. Live links connect directly to text of conventions and ordinances.

Hyperlinks to related SAPs and HAPs

Ranked list of existing and potential threats to the species, including brief descriptions and supporting literature

Species Account

Ascension BAP: Green Turtle



11. Current actions and opportunities:

- Local protection for green turtles and their eggs is strong and well-respected, and protection in the population's Brazilian feeding grounds has advanced considerably through Projeto TAMAR-IBAMA [34].
- Monitoring of the number of green turtle nests and nesting activities at Ascension Island has taken place intermittently since 1977 and annually since 1999 [1,5,13,33]. Annual monitoring currently focuses on Long Beach, Pan Am Beach and NE Bay, with periodic surveys of all nesting beaches carried out depending on the availability of volunteers or staff.
- Continuous monitoring of sand temperatures on Long Beach and North East Bay has been ongoing since 2004, with three permanent recording stations installed at each beach.
- The migratory routes and non-breeding distribution of green turtles nesting at Ascension have been well-defined using genetics and satellite telemetry [2,3].
- An unofficial moratorium on sand mining from nesting beaches has been in operation for several years [25], although this is not enacted in law.
- Periodic removal of invasive plant species from nesting beaches is carried out, and rodent bait stations have been installed around primary nesting sites.
- Guided turtle tours are run twice weekly during the nesting season to provide visitor information and help minimise disturbance associated with turtle-watching.
- Signage has been installed at primary nesting sites with guidelines that encourage best practice when observing nesting turtles.
- There is an informal but widely respected ban on evening events at Long Beach during the turtle nesting season and on the use of white lights at other beach huts.
- Known turtle stranding sites are checked daily during nesting season.

List of all existing conservation measures currently in place for the species, as well as recent developments that may present opportunities for further work.

Species Action Plan

Ascension BAP: Green Turtle



B. SPECIES ACTION PLAN

OBJECTIVES	TARGETS MET*
1. Maintain and build upon the high level of protection afforded to marine turtles at Ascension Island with a view to restoring the population to historical levels of abundance.	Aichi: 12 CITES: III, VIII CMS: II(3b), III(5) EC: 2
2. Preserve and enhance green turtle nesting habitat at Ascension Island through legislation, restoration and effective management of invasive species.	Aichi: 5, 9, 11, 15 CMS: III(4a,c) EC: 2-5
3. Monitor and mitigate threats to the Ascension Island green turtle population arising from climate change and commercial fishing operations.	Aichi: 6, 10 CMS: III(4b)
4. Expand the range of status monitoring for green turtles at Ascension Island and support research that directly contributes to conservation objectives.	Aichi: 19 CMS: II(3a) EC: 7
5. Raise the profile of the Ascension Island green turtle both locally and internationally, using the population as a flagship for broader conservation issues.	Aichi: 1 EC: 9, 10

*Note: Aichi: Aichi Biodiversity Targets; CITES: Convention on International Trade in Endangered Species; CMS: Convention on Migratory Species; EC: Ascension Island Environment Charter.

Over-arching objectives, setting out an overall vision for what we hope to achieve in coming years.

Each objective aligned with one or more MEA targets. Live links to convention texts.

PROPOSED ACTION	PARTNERS*	TIMEFRAME	MEETS OBJECTIVE
Policy & Legislation			
GT1. Establish Long Beach, Pan-Am Beach and North East Bay as nature reserves under the National Protected Areas Ordinance.	AIG, USAF	2014	1,2
GT2. Enact a legislative ban on sand mining from turtle nesting beaches and from offshore deposits surrounding Ascension Island.	AIG	2015	1,2
GT3. Update existing legislation underpinning CITES to comply with the basic legislative requirements of the Convention.	AIG	2015	1
GT4. Ensure that there is a transparent and accountable environmental impact assessment (EIA) policy for all new construction projects.	AIG	2016	1,2
Safeguards & Management			
GT5. Review existing petrochemical spill prevention and response plans to ensure adequate provision for the protection of green turtle nesting habitat and lodge copies with all relevant stakeholders.	CD, BBC, MOD, USAF	2015	1,2

SMART actions, individually coded for progress monitoring. Each action has a specified timeframe and contributes to one or more higher-level objectives. Plan also indicates other stakeholders who need to be involved.

Implementation and monitoring

BAP will be a **live document**, hosted within an electronic portal that allows actions to be logged, searched and reports to be generated

Initially hosted within an **SQL database** on AIG server, ultimately may be managed through an online portal similar to BARS

Progress against BAP targets will act as the **Key Performance Indicators** for the purpose of internal audits

New **research permitting policy** will be integrated with the BAP

Steering group of external partners will be established to monitor progress.



Lessons learned from developing Ascension Island's first BAP

Has been extremely useful as a catalyst for discussion and as a means to take stock of progress and refocus priorities.

But it is very easy to get side-tracked by trying to implement actions!

Many action plans have been developed in the past but most actions have not been implemented. It must be fully integrated into work programmes.

Consult the people who will be implementing the actions throughout.

Keep actions simple and to the bare essentials. It is tempting to write a wish list.

It will never be finished!

