

Guideline for an Ecological Assessment of Terrestrial Protected Area Sites

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Floyd Homer

[Adapted from "Guidelines for the Preparation of Country Studies on Biological Diversity, UNEP, 1993"]

Physical Correlates of Habitat

Using existing surveys and other sources of information, provide comparable maps and descriptions of the following parameters:

- Surface geology
- Soil type or structure
- Meteorology
- Topography
- Hydrology

Land Use Data

- Using the land use classification system adopted in Anguilla, prepare a map showing the present distribution of the main land use types. (The data may already be digitised by the relevant agencies.)
- Describe characteristics of land use types, distribution and trends in land use

Land Tenure and Property Rights

- Describe land ownership and resource use rights
- Map if possible, by two categories i.e. Crown lands and private lands

Infrastructure Development

- Existing transport network, including density and pattern by type
- Projected extension of the transportation network over the next 10 years

Forests, Natural Vegetation and Wetlands

Analysis of Forest, Natural Vegetation and Wetlands

- Major plant communities, including forest types and location
- Size, ownership and uses of wetland or forest (protection, production, conservation)
- The number of species in major taxonomic groups (at a minimum, groups could be: mosses, ferns, grasses, other flowering plants, etc) should be compiled

- Endemic, rare and endangered plants, including location, threats and conservation status (scientific and common names should be used)
- Invasive and introduced species, including control measures
- Proportion of each vegetation/habitat type protected or managed
- Biodiversity quality of these habitats
- Rate of change of these habitats over the last decade (if known, or best guess)
- Level of research on this forest/vegetation/wetland

Benefits of Forests, Natural Vegetation and Wetlands

Include how the resource is being used, by whom and for what purposes. Some of these benefits may require economic valuation techniques to derive a dollar value.

- Direct use (subsistence, recreational, commercial, medicinal etc)
- Indirect use (ground water recharge, habitat value, carbon sink etc)
- Optional use (known and potential future uses such as bioprospecting)
- Passive use (existence values)

Wildlife

Analysis of Fauna

- The number of species in major taxonomic groups (at a minimum, groups could be: birds, mammals, fishes, insects, amphibians, reptiles) should be compiled
- Endemic, rare and endangered animals, including location, threats and conservation status (scientific and common names should be used)
- Invasive and introduced species, including control measures
- Level of research on fauna

Benefits of Fauna

Include how the resource is being used, by whom and for what purposes. Some of these benefits may require economic valuation techniques to derive a dollar value.

- Direct use (subsistence, recreational, commercial etc)
- Indirect use (pollination, seed distribution etc)
- Optional use (known and potential future uses)
- Passive use (existence values)

Adverse Impacts on Biological Diversity *[past, present and potential]*

In the context of the local situation the following categories of activities (or others) can be selected and described where relevant:

- (1) unmanaged harvest of wild species for consumption;
- (2) killing of wild species as pests or weeds;

- (3) deliberate introduction of exotic species;
- (4) accidental introduction of exotic species;
- (5) conversion of land to agriculture or other development eg hotel, golf course ,etc;
- (6) improper management of land;
- (7) shifting cultivation on too short a cycle;
- (8) overstocking by domestic livestock;
- (9) accidental or deliberate burning, or change in natural fire regime;
- (10) mining/dredging;
- (11) road construction;
- (12) urbanisation;
- (13) overuse for recreational reasons;
- (14) drainage of wetlands;
- (15) use of potentially polluting chemicals in agriculture;
- (16) use of potentially polluting chemicals in industrial processes;
- (17) production of polluting chemicals as a by-product of industrial processes;
- (18) production of human effluent and other domestic waste products; and
- (19) natural disasters, such as hurricanes, flooding etc.

Policy and Programmes

Relevant policies and programmes initiated by government which have direct and indirect impacts on the biological resources under review.

Recommended Actions

- To protect fauna
- To conserve natural vegetation
- To manage habitats