



ANGUILLA NATIONAL TRUST

Preservation For Generations

National Survey to Determine the Environmental Priorities of Anguilla: Results and Recommendations

Farah Mukhida¹

¹*Anguilla National Trust,
Museum Building, Albert Lake Dr.
P.O. Box 1234
The Valley, Anguilla
antpam@anguillanet.com*

Introduction

In September 2005, a National Focal Group (NFG) was established in Anguilla with the assistance of the United Nations Development Programme and the Global Environment Facility Small Grants Programme (GEF SGP). The GEF SGP provides financial and technical assistance to non-government organisations (NGOs) and community-based organisations (CBOs) for projects which conserve and restore the environment and which also enhance people's well-being and livelihoods. More specifically, the SGP supports work that is consistent with the five GEF Focal Areas of 1. biodiversity conservation; 2. climate change mitigation; 3. protection of international waters; 4. prevention of land degradation; and 5. phasing out of persistent organic pollutants.

The NFG was established in Anguilla to help NGOs and CBOs to build their capacity and to implement projects as they relate to the five Focal Areas. Moreover, the NFG is to be directed by a Country Programme Strategy (CPS) that outlines the priorities, needs, and focus of the island as determined by stakeholders involved in the programme and process. The CPS, in turn, guides organisations as they seek SGP funding to develop and implement environment-related projects.

In an effort to design this CPS, a stakeholder meeting was held on 19 December 2006. Facilitated by Mr. Giles Romulus of the UNDP GEF SGP, the meeting was attended by representatives of six of Anguilla's government and nongovernment agencies (Appendix 1). Presentations on the GEF SGP, the organisation's results-based management approach, and the CPS were made by Mr. Romulus. Following the presentations, participants discussed and prioritised main environmental concerns and issues for the island. A list comprised of twenty problems was compiled and the top five concerns were identified (Appendix 2). Given, however, that only seven individuals from six agencies were present, it was agreed that the list and prioritisation of environmental concerns may not actually reflect national priorities. It was further agreed that the Anguilla National Trust (ANT) would administer a national survey to determine such priorities.

Methodology

Simple Random Surveys and Opinion Polls

The national survey was drafted based on the results of the 19 December 2006 stakeholder meeting by the ANT (Appendix 3). It was conducted by both the ANT and the ALHCS (ALHCS) Environmental and Conservation Club following a simple random sample. Individuals surveyed were asked to choose the top three environmental problems with which they were most concerned or to provide their own if it was not listed. Ranking within their choices was not required. Each choice was awarded a single point.

600 surveys were distributed among 19 members of the ALHCS Environmental Club. 368 surveys were returned. The survey itself was an opinion poll. It was designed to determine the opinions of a population on environmental issues and problems. Opinion polls survey a small but representative sample of the population. A simple random survey, meanwhile, is based on the premise that every possible individual has an equal chance of being chosen from the population. Each individual from the population is randomly chosen by chance and therefore each subject has an equal probability of being chosen at any stage of the sampling process. Given that Anguilla's population totals approximately 12 000, sampling was conducted without replacement such that no individual within the population would be sampled more than once.

Surveyors were instructed to randomly select subjects, that no subject was to be sampled more than once, and that surveys should be conducted across the island such that clustering in any one area or community would be minimised. Since surveyors lived across the island, they were encouraged to conduct the surveys in their own communities and to survey a cross-section of those communities.

Limitations of the Methodology

Sampling error

Sampling error is related to the effects of chance on the sampling process with the level of uncertainty expressed as a margin of error. Generally, the larger the sample size, the lower the margin of error. With 368 individuals sampled out of a population of 12 000, the sample size is approximately 3% of the total population. In addition, simple random sampling also requires a sampling frame and an unbiased random selection is important in order to ensure that the sample represents the population. There is, however, no guarantee that the sample will actually be a perfect representation of the population and the individuals who are sampled is highly dependent on the lengths taken by the surveyors to ensure that they do not pre-select or cluster individuals.

Nonresponse bias

Since not all surveys were returned and since some individuals refused to complete the survey, the poll sample may not be completely representative of the population. According to the surveyors, however, the number of "nonresponse" surveys was relatively low and thus may have a minimal impact on the results.

Response bias

Survey results may be affected by response bias. Such bias is related to the answers provided by the respondents especially if they feel pressure to not give an unpopular answer. In the case of this particular survey, the topic was not controversial and it was made clear that the answers provided should reflect the respondent's own personal beliefs that there was no right or wrong answers.

Wording of questions

The wording of questions/choices and the order in which they are asked can impact how questions are answered by the respondents. The survey was designed from the results of a previous meeting with wording made relatively simple. Multiple examples were used in some instances to describe the choices. While providing examples may be helped to describe an environmental problem or issue, it may also have had the opposite effect. That is, examples may have acted to narrow the definitions. The potential bias resulting from the providing of examples was weighed against the impact of individuals not fully understanding the environmental problem. It was believed that the impact of the latter outweighed the former. The survey was also independently reviewed to ensure that it was easy to read, understand, and could be completed without the respondent having to invest a significant amount of time or effort.

Results

Residents were asked to identify the three environmental issues with which they were most concerned (Appendix 4). The five problems that garnered the most votes, in descending order, were:

1. Invasive species: 104 votes from 368 surveys
 - 28.26% ± 2.3%
2. Unsustainable use of coastal resources: 94 votes from 368 surveys
 - 25.81% ± 2.3%
3. Solid waste management: 85 votes from 368 surveys
 - 23.10% ± 2.2%
4. Poor land use planning: 84 votes from 368 surveys
 - 22.83% ± 2.2%
5. Limited public awareness and education about environmental issues: 84 votes from 368 surveys
 - 22.83% ± 2.2%

Conclusion and Recommendations

When compared to the results of the 19 December 2006 meeting, priorities identified by stakeholders differed slightly from those identified at the national level. That is, the three priority issues identified during the meeting were, in descending order: 1. limited public awareness and education about environmental issues (85.71%); 2. limited environmental monitoring (71.43%); and 3. solid waste management (57.14%). Priorities identified nationally, meanwhile, were, in descending order: 1. invasive species (28.26% ± 2.3%); 2. unsustainable use of coastal resources (25.81% ± 2.3%); and 3. solid waste management (23.10% ± 2.2%).

It is recommended that the results of the national survey guide the development of and be integrated into Anguilla's Country Programme Strategy. It is also recommended that a second survey using the same terminology and choices regarding environmental problems be administered in a year to determine whether priorities have changed and whether any progress has been made in terms of addressing national environmental concerns.

Appendix 1. List of participants at the 19 December 2006 stakeholder meeting.

1. Charles Connor, Department of Education, Government of Anguilla
2. Ingrid Fullington, Optimist Club of Anguilla
3. James Gumbs, Department of Fisheries and Marine Resources, Government of Anguilla
4. Damien Hughes, Anguilla National Trust
5. Farah Mukhida, Anguilla National Trust
6. Lenox Proctor, Department of Youth and Culture, Government of Anguilla
7. Jaine Rogers, Water Laboratory, Government of Anguilla

Appendix 2. Results from the 19 December 2006 stakeholder meeting.

<i>Environmental Problem</i>	Total (results from 7 respondents)
Weak Environmental Legislation	1
Poor Enforcement of Environmental Legislation	1
Limited Environmental Monitoring (e.g. on-going water quality monitoring, fish stock monitoring, breaches of environmental laws, etc.)	5
Unsustainable Use of Coastal Resources (e.g. sand mining, sand dune destruction, hotel construction, sewage, grey water, etc.)	2
Solid Waste Management (e.g. household garbage, etc.)	4
Liquid Waste Management – on land (e.g. grey water, sewage, etc.)	1
Liquid Waste – from ships (e.g. boats dumping sewages into the sea)	0
Land Degradation (e.g. clearing of land for buildings, overcrowding of areas and associated increase in waste, sewage, etc.)	2
Destruction of Wetlands (e.g. infilling salt ponds, clearing of mangrove forests, etc.)	1
Invasive Species (e.g. the Giant African Snail)	0
Poor Land Use Planning	0
Limited Information about Biodiversity (e.g. birds, reptiles, fish, plants, etc.)	1
Limited Information about the Biophysical Environment (e.g. sea currents, land, climate, habitats, etc.)	2
Coral Bleaching	1
Decline in Fish Size	1
Decline in Reef Fish Population and Size of Reef Fish	1
Limited Coordination and/or Communication among Agencies responsible for Environmental Management	2
Limited Ability of Community Organisations to deal with Environmental Issues	2
Piecemeal Approach to Natural Resource Management (resource management approaches aren't holistic and don't look at the whole picture – they are not integrated)	1
Limited Public Awareness and Education about Environmental Issues	6
Other (please identify)	0

Appendix 3. National survey to determine Anguilla's environmental priorities.

NATIONAL SURVEY

What About the Environment is Important to You? Determining Anguilla's Environmental Priorities

Over the next three months, the Anguilla National Trust will be working with the United Nations Development Programme to create an environmental country programme strategy. Before we can develop this strategy, we need to know what Anguillians consider to be the most pressing environmental issues that are affecting this island. Below is a list of environmental problems that have been identified. We ask that you to take a few minutes to review the list and to identify the top **THREE** issues that **YOU** are most concerned about. Thank you for your time and cooperation.

<i>Environmental Problem</i>	What are the most critical problems? (choose top 3)
Weak Environmental Legislation	
Poor Enforcement of Environmental Legislation	
Limited Environmental Monitoring (e.g. on-going water quality monitoring, fish stock monitoring, breaches of environmental laws, etc.)	
Unsustainable Use of Coastal Resources (e.g. sand mining, sand dune destruction, hotel construction, sewage, grey water, etc.)	
Solid Waste Management (e.g. household garbage, etc.)	
Liquid Waste Management – on land (e.g. grey water, sewage, etc.)	
Liquid Waste – from ships (e.g. boats dumping sewages into the sea)	
Land Degradation (e.g. clearing of land for buildings, overcrowding of areas and associated increase in waste, sewage, etc.)	
Destruction of Wetlands (e.g. infilling salt ponds, clearing of mangrove forests, etc.)	
Invasive Species (e.g. the Giant African Snail)	
Poor Land Use Planning	
Limited Information about Biodiversity (e.g. birds, reptiles, fish, plants, etc.)	
Limited Information about the Biophysical Environment (e.g. sea currents, land, climate, habitats, etc.)	
Coral Bleaching	
Decline in Fish Size	
Decline in Reef Fish Population and Size of Reef Fish	
Limited Coordination and/or Communication among Agencies responsible for Environmental Management	
Limited Ability of Community Organisations to deal with Environmental Issues	
Piecemeal Approach to Natural Resource Management (resource management approaches aren't holistic and don't look at the whole picture – they are not integrated)	
Limited Public Awareness and Education about Environmental Issues	
Other (please identify)	

Appendix 4. Results from the national survey regarding Anguilla’s environmental priorities.

<i>Environmental Problem</i>	Total (results from 368 surveys)
Weak Environmental Legislation	57
Poor Enforcement of Environmental Legislation	64
Limited Environmental Monitoring (e.g. on-going water quality monitoring, fish stock monitoring, breaches of environmental laws, etc.)	67
Unsustainable Use of Coastal Resources (e.g. sand mining, sand dune destruction, hotel construction, sewage, grey water, etc.)	95
Solid Waste Management (e.g. household garbage, etc.)	85
Liquid Waste Management – on land (e.g. grey water, sewage, etc.)	40
Liquid Waste – from ships (e.g. boats dumping sewages into the sea)	43
Land Degradation (e.g. clearing of land for buildings, overcrowding of areas and associated increase in waste, sewage, etc.)	64
Destruction of Wetlands (e.g. infilling salt ponds, clearing of mangrove forests, etc.)	46
Invasive Species (e.g. the Giant African Snail)	104
Poor Land Use Planning	84
Limited Information about Biodiversity (e.g. birds, reptiles, fish, plants, etc.)	39
Limited Information about the Biophysical Environment (e.g. sea currents, land, climate, habitats, etc.)	34
Coral Bleaching	36
Decline in Fish Size	58
Decline in Reef Fish Population and Size of Reef Fish	39
Limited Coordination and/or Communication among Agencies responsible for Environmental Management	19
Limited Ability of Community Organisations to deal with Environmental Issues	22
Piecemeal Approach to Natural Resource Management (resource management approaches aren’t holistic and don’t look at the whole picture – they are not integrated)	21
Limited Public Awareness and Education about Environmental Issues	84
Other (please identify)	3