

ANTIGUA AND BARBUDA

Sustainable Island Resource
Management Zoning Plan for
Antigua and Barbuda
(including Redonda)

ANTIGUA AND BARBUDA

Sustainable Island Resource Management Zoning Plan for Antigua and Barbuda (including Redonda)



In Association with
Ivor Jackson and Associates and Kingdome Consultants Inc.

20th Fl, Nicholas Tower, 63-65 Independence Square, Port of Spain, TRINIDAD,
W.I.

Phone: (868) 624-8039 | Fax: (868) 623-7170 | pos@genivar.com

December 2011

Table of Contents

EXECUTIVE SUMMARY	x	3.3.2 Environmental Resources	43
1.1 Mandate	4	4.1 Settlement Pattern	52
1.2 Planning Approach	4	4.2 Historic Settlement Pattern	52
2.1 Vision	10	4.3 Current Settlement Pattern	53
2.2 Goals	11	4.3.1 Antigua Settlement Pattern	53
3.1 Background	15	4.3.2 Barbuda Settlement Pattern	61
3.1.1 Context	15	4.4 Population	64
3.1.2 Geology and Soils	15	4.5 Housing	67
3.1.3 Topography	17	4.5.1 Housing Demand	67
3.1.4 Climate	21	4.5.2 Land Requirement for Housing	71
3.2 Ecosystems	22	4.5.3 Squatting	74
3.2.1 Ecosystem Units	22	4.6 Economy and Employment	77
3.2.2 Biodiversity and Wildlife	35	4.7 Social Infrastructure	85
3.2.3 Protected Areas	38	4.7.1 Health	85
3.3 Land use Suitability and Capacity	40	4.7.2 Education	86
3.3.1 Environmental Risk and Vulnerability	40	4.7.3 Community Facilities	88
		4.7.4 Protective Services	88
		4.8 Physical Infrastructure	89
		4.8.1 Traffic and Transportation	89

4.8.2	Water and Wastewater Infrastructure	93	5.4.3	Requirements to Achieve the Aims of the Selected Development Scenario	109
4.8.3	Solid Waste	95	6.1	Introduction	115
4.8.4	Energy	95	6.2	Environmental Quality	115
5.1	Purpose	97	6.2.1	Ecological Integrity	115
5.1.1	Factors Influencing Current Spatial Patterns	97	6.2.2	Environmental Risk	122
5.1.2	Development Trends	98	6.2.3	Environmental Resources	124
5.1.3	Existing Patterns within Settlements	99	6.3	Economy and Livelihoods	129
5.1.4	Area Protection Initiatives	99	6.3.1	Tourism	129
5.2	Alternative Spatial Development Scenarios	100	6.3.2	Retail, Services, and Industry	133
5.2.1	Current Trends Scenario	100	6.4	Liveability	138
5.2.2	Decentralization Scenario	102	6.5	Accessibility	142
5.2.3	Hierarchical Network of Settlements	103	6.6	Governance	148
5.3	Evaluation of Alternative Spatial Development Scenarios	105	6.7	Comprehensive SIRMZP	150
5.3.1	Maintain and Enhance Ecosystem functions	106	6.8	Redonda	154
5.3.2	Foster Economic Development and Engaging Livelihoods	106	7.1	Development Control Administrative Structure and Equipment	156
5.4	Preferred Spatial Development Scenario	108	7.2	Planning and Development Control Process	160
5.4.1	Suggested Development Scenario	108	7.2.1	Planning Hierarchy	160
5.4.2	Additional Initiatives	108	7.2.2	Planning Process	162

7.2.3	Development Control	163
7.3	Development Control Guidelines for Discrete Spatial Units	165
7.3.1	Environmental Protection Areas	172
7.3.2	Environmental Impact Assessments (EIA)	173
7.3.3	Additional Requirements for Specific Areas	173
7.3.4	Agriculture Program on Crown Land	173
7.3.5	Settlement Restructuring	174
7.3.6	Performance Bonds	174
7.3.7	Light Industrial and Service Activities in Residential Areas	175
7.3.8	Acquired Rights	175
7.3.9	Compensation and Acquisition	175
7.4	Concluding Remarks	176
8.1	Short Term Actions	178
8.2	Medium Term Actions	179

List of Tables

Table 3.1	Forest Types of Antigua and their General Location	Table 6.1	Land Use Suitability Model: Ecological Integrity
Table 3.2	Existing Storage Volumes of Major Watersheds in Antigua	Table 6.2	Land Use Suitability Model: Environmental Risk
Table 3.3	Existing Wells in Antigua	Table 6.3	Land Use Suitability Model: Environmental Resources
Table 3.4	Historic and Cultural Sites in Antigua and Barbuda	Table 6.4	Land Use Suitability Model: Tourism
Table 4.1	Number of Parcels With and Without Buildings in Antigua	Table 6.5	Land Use Suitability Model: Retail, Services and Industry
Table 4.2	Population Estimates and Projections ('000s)	Table 6.6	Land Use Suitability Model: Liveability
Table 4.3	Population Growth by Parish	Table 6.7	Land Use Suitability Model: Accessibility
Table 4.4	Projected Housing Demand	Table 6.8	Land Use Suitability Model: Governance, Planning Hierarchy
Table 4.5	Land Requirements for Housing	Table 6.9	Detailed Breakdown of Each Area for Each Land Use Category
Table 5.1	Spatial Development Scenario Rating Legend	Table 7.1	General Procedures
Table 5.2	Evaluation of Spatial Development Scenarios	Table 7.2	Lotification Guidelines
Table 5.3	Services/Facilities Suggested for Various Settlement Types	Table 7.3	SIRZMP Development Guidelines
		Table 8.1	Recommended Short Term Actions
		Table 8.2	Recommended Medium Term Actions

List of Figures

Figure 1.1	Maps of Antigua and Barbuda	Figure 3.10	Critical Environmental Areas (Barbuda)
Figure 1.2	Map of the Caribbean	Figure 3.11	Environmental Risk and Vulnerability (Antigua)
Figure 1.3	Planning Approach	Figure 3.12	Archaeological Sites (Barbuda)
Figure 2.1	The Goals of the SIRMZP	Figure 4.1	Built Form (Antigua)
Figure 3.1	Geology Map of Antigua	Figure 4.2	Land Use Map (Antigua)
Figure 3.2	Elevation Map using a TIN (Antigua)	Figure 4.3	Parcels less than 1 ha with buildings in All Saints
Figure 3.3	Elevation Map using Contours (Barbuda)	Figure 4.4	Built Form and Land Use (Barbuda)
Figure 3.4	Topographic Map of Redonda	Figure 4.5	UN Population Projections (1950-2050)
Figure 3.5	Wooded Areas (Antigua)	Figure 4.6	Persons Per Household (Antigua and Barbuda)
Figure 3.6	Vegetation Communities for Codrington Lagoon National Park	Figure 4.7	St. John's Parcels less than 1Ha with Buildings
Figure 3.7	Wooded Areas /Forest (Barbuda)	Figure 4.8	Squatting Hotspots (Antigua)
Figure 3.8	Major Watersheds (Antigua)	Figure 4.9	GDP for selected countries 1969-2009
Figure 3.9	Critical Environmental Areas (Antigua)	Figure 4.10	GDP per capita, PPP: Antigua and Barbuda 1980-2008 Constant 2005 International Dollars
		Figure 4.11	GDP Annual Growth Rate (%) Antigua and Barbuda 1978-2008

https://www.yunbaogao.cn/report/index/report?reportId=5_9929

预览已结束，完整报告链接和二维码如下：



ement Zoning Plan for Antigua and Barbuda (including Redonda)

· % Share Antigua and Barbuda

2001-2009

(Antigua)

(Antigua)

(Barbuda)

eservoirs & Desalination Plants

c of Settlements (Antigua and

tigua)

rbuda)

d Protected Areas (Antigua)

Figure 6.4

Figure 6.5

Figure 6.6

Figure 6.7

Figure 6.8

Figure 6.9

Figure 6.10

Figure 6.11

Figure 6.12

Figure 6.13

Figure 6.14

Figure 6.15

Figure 6.16

Figure 6.17

Figure 6.18

Existing and Proposed Protected Areas (Barbuda)

Environmental Risk Areas (Antigua)

Environmental Resource Areas (Antigua)

Environmental Resource Areas (Barbuda)

Major Tourism Facility Areas (Antigua)

Major Tourism Facility Areas (Barbuda)

Retail Services and Industries (Antigua)

Retail Services and Industries (Barbuda)

Liveability (Antigua)

Fire Response Times (Antigua)

Police Response Times (Antigua)

Accessibility (Antigua)

Governance (Antigua)

SIRMZP (Antigua)

SIRMZP (Barbuda)