

This document links with
“Anguilla Natural Capital Accounting - Final
Report”

This is part of the Anguilla Natural Capital
Accounts

<https://jncc.gov.uk/our-work/natural-capital-in-the-caribbean-uk-overseas-territories/>

Anguilla Ecosystem Assessment 2018		
Tab	Description	Type of tab
Overview	Overview of the structure of the account with hyperlinks to each reporting statement and supporting schedule.	Explanatory
Key	Presents a map explaining the broad organisation of tabs within this workbook.	Explanatory
Scope	Asset matrix assessing the presence of habitats and ecosystem services.	Scope
Summary	Summary of the Physical and Monetary accounts with overall annual and asset value.	Summary table
Account Overview	A breakdown of the natural capital account, providing the annual and asset values of each natural capital benefit included in the account, along with methodological assumptions.	Reporting statement
S1. Extent account	Presents the extent and condition of present habitats.	Summary table
S2. Physical flow account	Presents a summary of the estimated physical flow of goods and services provided by natural capital in the baseline year.	Summary table
	Estimation of fisheries benefits supported by the natural environment.	Supporting schedule
	Estimation of agriculture benefits supported by the natural environment.	Supporting schedule
	Estimation of tourism benefits produced by the natural environment.	Supporting schedule
	Estimation of local cultural benefits supported by the natural environment.	Supporting schedule
	Estimation of heritage salt pond benefits supported by the natural environment.	Supporting schedule
	Estimation of local cultural services benefits supported by the natural environment.	Supporting schedule
	Estimation of carbon sequestration benefits provided by the natural environment.	Supporting schedule
	Estimation of avoided carbon losses resulting from current land management practices.	Supporting schedule
	Estimation of coastal defence benefits supported by the natural environment.	Supporting schedule
	Estimation of surface hydrology benefits supported by the natural environment.	Supporting schedule
S3. Monetary flow account	Presents a summary of the estimated monetary flow (\$ value) of goods and services provided by natural capital in the baseline year.	Summary table
	Estimation of the value of fisheries benefits from the natural environment.	Supporting schedule
	Estimation of the value of agriculture from the natural environment.	Supporting schedule
	Estimation of the value of tourism benefits from the natural environment.	Supporting schedule
	Estimation of the value of local cultural services supported by the natural environment.	Supporting schedule
	Estimation of the value of heritage salt pond benefits supported by the natural environment.	Supporting schedule
	Estimation of the value of local cultural services benefits from the natural environment.	Supporting schedule
	Estimation of the value of carbon sequestration benefits from the natural environment.	Supporting schedule
	Estimation of the value of avoided carbon losses.	Supporting schedule
	Estimation of the value of coastal defence from the natural environment.	Supporting schedule
	Estimation of the value of surface hydrology benefits from the natural environment.	Supporting schedule
Carbon Prices	Data providing the basis of carbon valuation	Input
ECCD Deflators	Data used to calculate consistent prices years in the monetary flow account.	Input
UK GDP Deflator	Data used to calculate consistent prices years in the monetary flow account, specifically used to inflate the carbon prices from 2017 to 2018 values	Input
US\$ GDP Deflator	Data used to calculate consistent prices years in the monetary flow account.	Input
EUR GDP Deflator	Data used to calculate consistent prices years in the monetary flow account.	Input

Date produced	Mar-19
Baseline year	2018

eftec

 **JNCC**
Joint Nature Conservation Committee

 **Funded by
UK Government**

SX. Benefit name

Workings

This box holds the title of the tab.

This tab presents the broad organisation of each of the separate physical and monetary flow tabs.

Baseline (2017/2018)

Total value xx number per year

This box describes an overview of the tab.

This box presents the total annual value (either physical flow or monetary value) provided.

Data

ID	Description	Source	Values	Notes
2.1a	Population data	ONS	1,234	

This box presents the key data used to estimate physical or monetary flows.

Assumptions

ID	Description	Source	Explanation
2.1e	It is assumed...		

This box presents the key assumptions used to estimate physical or monetary flows.

Steps

Step	Description	Data/Assu	Explanation
2.1.1	For example, estimate	2.1a	This is done by...

This box presents the steps to using the key data and assumptions to estimate physical or monetary flows.

Year (chron) 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028

Year (project) 1 2 3 4 5 6 7 8 9 10 11 12

Time horizon (years) 60

This box details the discount rates and years across the time horizon.

Annual total xxx xxx

This box presents the annual values across the time horizon. The values here correspond with the discount rates displayed for each year in the box above.

Scope of Account

This schedule summaries the scope of the natural capital for the country.

NCA - refined benefits scoping for inclusion in accounts

Ecosystems		Coastal/Marine							Terrestrial						
		Marine - Coral reefs	Marine - Seagrass	Marine - Beaches	Marine - Fishery limits	Sand dunes, beaches	Wetlands - mangroves	Pelagic zones of biodiversity importance	Salt ponds	Dry broadleaf forest	Pine yard	Broadleaf scrub	Coastal coppice	Dune scrub	Herbaceous
Provisioning services	Fisheries														
	Agriculture														
Regulating services	Coastal hazard protection														
	Terrestrial hazard protection														
	Carbon sequestration and retention														
Cultural services	Tourism														
	Heritage (Salt Ponds)														
	Local cultural services														

Key

Priority asset-service provision

Initial habitat and ecosystem service prioritisation

Ecosystems		Coastal/Marine							Terrestrial						
		Marine - Coral	Marine - Seagrass	Marine - Beaches	Marine - Fishery limits	Sand dunes, beaches	Wetlands - mangroves	Pelagic zones of biodiversity importance	Dry broadleaf forest	Pine yard	Broadleaf scrub	Coastal coppice	Dune scrub	Herbaceous	Seasonal wetlands
Provisioning services	Food - Subsistence fisheries														
	Food - Commercial fisheries														
	Food - crops/agriculture														
	Raw materials - Woods/lumber														
	Raw materials - Craft materials														
	Medicinal values - bush medicine														
Regulating services	Coastal protection - Flood risk reduction														
	Coastal protection - Sea surge prevention														
	Erosion control														
	Climate regulation/carbon sequestration														
	Windbreak														
	Water quality regulation														
	Buffer - noise, dust														
	Air quality - filtering of air by trees/plants														
Cultural services	Tourism														
	Local recreation														
	Historical and archaeological values														
	Spiritual values														
	Iconic species														
	Education and Research														
Supporting services	Primary production														
	Nutrient cycling														
	Ecosystem protection														
	Habitat provisioning														

Key

Priority asset-service provision

Anguilla Natural Capital Accounts

Benefit	Indicator	Quantity - Baseline year	Unit	Value - Baseline year (EC\$)	PV 25 (EC\$)	Notes
Fisheries	Spiny Lobster (<i>Panulirus argus</i>)	937,689	lbs	\$ 17,785,000	\$ 303,383,000	
	Queen Conch (<i>Strombus gigas</i>)	159,863		\$ 2,165,000	\$ 36,937,000	
	Reef fish (mixed)	1,045,884		\$ 14,166,000	\$ 241,655,000	
	Other Finfish (mixed)	275,496		\$ 5,225,000	\$ 89,135,000	
	Total	2,418,933		\$ 39,342,000	\$ 671,110,000	
Agriculture	Beets	287	lbs	\$ 1,000	\$ 17,000	
	Carrots	154		\$ 1,000	\$ 12,000	
	Corn (Maize)	5,930		\$ 30,000	\$ 510,000	
	Cucumber	10,626		\$ 54,000	\$ 913,000	
	Egg Plants	6,570		\$ 34,000	\$ 576,000	
	Limes	1,808		\$ 7,000	\$ 124,000	
	Papaw	3,064		\$ 12,000	\$ 211,000	
	Pigeon Peas	7,496		\$ 53,000	\$ 902,000	
	Pumpkin	7,937		\$ 24,000	\$ 409,000	
	Sweet Peppers	4,542		\$ 23,000	\$ 390,000	
	Sweet Potatoes	2,469		\$ 10,000	\$ 170,000	
	Tomatoes	9,017		\$ 45,000	\$ 775,000	
	Lettuce (inc. Green Cuisine)	16,400		\$ 83,000	\$ 1,410,000	
	Kale, Thyme, Parsley, Celery	1,058		\$ 23,000	\$ 400,000	
	Chives	2,734		\$ 25,000	\$ 423,000	
	Watermelon	2,557		\$ 8,000	\$ 132,000	
	Cassava	639		\$ 3,000	\$ 44,000	
	Stringbeans	1,146		\$ 3,000	\$ 59,000	
	Other	1,389		\$ 6,000	\$ 96,000	
	Total	85,824		\$ 444,000	\$ 7,573,000	
Tourism	Swimming of other water activities	167,388	Tourist nights	\$ 59,065,000	\$ 1,007,544,000	
	Sunbathing / relaxing on beach	164,658		\$ 38,734,000	\$ 660,743,000	
	Boating / sailing / watercraft	39,619		\$ 13,980,000	\$ 238,475,000	
	Scuba diving	8,188		\$ 3,853,000	\$ 65,718,000	
	Snorkelling	61,041		\$ 28,719,000	\$ 489,894,000	
	Fishing	6,121		\$ 2,880,000	\$ 49,122,000	
	Golfing	10,939		\$ 2,573,000	\$ 43,895,000	
	Offshore cays	19,830		\$ 9,330,000	\$ 159,149,000	
	Horseback riding	4,404		\$ 1,036,000	\$ 17,674,000	
	Bird sanctuaries / ponds	5,087		\$ 2,393,000	\$ 40,825,000	
	Hiking / Nature trail	12,138		\$ 5,711,000	\$ 97,415,000	
	Garden or botanic displays	5,087		\$ 1,197,000	\$ 20,412,000	
	Carnival & boat racing	8,044		\$ 1,892,000	\$ 32,278,000	
	Other	8,313		\$ 10,559,000	\$ 180,126,000	
	Total	602,575		\$ 194,359,000	\$ 3,315,441,000	
Local cultural services	ANT Heritage Tours	279	Number of attendees	\$ 10,000	\$ 169,000	
	ANT Dates with Nature	588		\$ 79,000	\$ 1,354,000	
	Value of cultural services to local pop.	15,045		Popualtion	\$ 2,829,000	
Heritage Salt Ponds	Road Salt Pond	377	Number of buildings within 200m			
	Long Pond	198				
	Total	575				
Carbon Sequestration	Dry forest	37	tCO2e/yr	\$ 4,000	\$ 5,000	
	Mangrove	763		\$ 84,000	\$ 1,998,000	
	Seagrass	6,738		\$ 745,000	\$ 17,645,000	
	Total	7,538		\$ 834,000	\$ 19,648,000	
Coastal Hazard	Avoided hotel closures	1,124	Number of lost room days	\$ 556,000	\$ 9,476,000	
	Avoided infrastructure damage	96,298		\$ 56,000	\$ 948,000	
Terrestrial Hazard		-	Square feet	\$ 9,806,000	\$ 167,276,000	
TOTAL		-		\$ -	\$ -	
				\$ 248,170,000	#REF!	

Natural capital account overview

Summary of key data. It is populated from the supporting schedules S2 and S3.

Annual Overview	Physical		Monetary		Present Value
	Measure/ year	Units	Baseline (2017/18)	Uncertainty & valuation method	
At May 2019	Annual Value				PV (EC\$)
Benefits					
Fisheries	2,418,933	Ib caught per year	39,342,000	Average price received for total fish caught each year	671,110,000
Agriculture	85,824	Ib of agricultural yields each year	444,000	Average price received for total agricultural yield each year	7,573,000
Tourism	602,575	Total visitor nights	194,359,000	Total visitor expenditure attributed to natural capital	3,315,441,000
Local cultural services	867	Anguilla National Trust tour attendees	89,000	Value of Anguilla National Trust tours	1,523,000
	15,045	Local Anguilla resident population	2,829,000	Value of cultural services to local population	50,136,000
Heritage salt pond	575	Number of people living within 200m of heritage ponds			
Carbon sequestration	7,538	Tonnes of carbon equivalent sequestered each year	834,000	Value of carbon sequestered	19,648,000
Coastal hazard protection					
Hotel closures	1,124	Number of avoided lost room days	556,000	Avoided hotel revenue lost in a year due to water damage	9,476,000
Infrastructure damage	96,298	Square feet avoided damage in storm surge zones	56,000	Avoided accommodation tax revenue lost due to water damage	948,000
Terrestrial hazard protection			9,806,000	Total avoided infrastructure damage cost	167,276,000
Total Annual Value			248,170,000		4,240,660,000
Level of Uncertainty	Description of Uncertainty				
High	Evidence is partial and significant assumptions are made that require further research.				
Moderate	Based on assumptions grounded in science and using published data but with some uncertainty regarding the combination of assumptions.				
Low	Evidence is peer reviewed or based on published guidance.				

Anguilla Extent Account 2017/2018

This tab reports the total extent of habitats and stocks of on the island of Anguilla

Habitat Baseline 2017/2018				
Typology	Super Class	Class	Extent (m ²)	Count of features
	Bare ground	Bare Ground	3,190,116	892
	Beach	Beach classification	1,522,543	163
	Buildings	Buildings	1,919,022	7,682
		Agriculture	722,087	67
		Fallow	2,206,676	186
	Cultivated land	Total	2,928,763	253
	Developed land	Airport	443,222	3
		Disturbed	2,451,883	632
	Disturbed area	Mineral Disturbed	773,893	189
		Total	3,225,776	821
	Dry forest	Dry Forest	478	1
		Mineral Dry Forest	17,642	1
		Total	18,120	2
	Ironshore	Ironshore classification	2,201,295	132
	Mangrove	Mangrove	1,194,680	103
	Open water	Ponds classification	2,973,613	57
		Recreation	64,499	53
	Recreation	Golf course	332,619	20
		Total	397,119	73
	Roads	Road	2,577,944	1,392
		Mineral Scrub	3,533,024	474
	Scrub	Mineral Scrub Scattered	527,738	124
		Mineral Scrub w Thicket Chars	89,677	42
		Scrub Dune	832,704	119
		Scrub Limestone	34,769,463	1,144
		Scrub Scattered	3,094,374	332
		Scrub Scattered Cacti	1,412,629	47
		Scrub Scattered Limestone Pment	2,636,303	309
		Scrub w Thicket Chars	1,116,069	357
		Total	48,011,980	2,948
	Thicket	Mineral Thicket	1,014,559	171
		Mineral Thicket w Dry Forest Char	36,770	10
		Thicket Dry Forest Characteristics	195,388	56
		Thicket Dune	40,770	6
		Thicket Limestone	6,659,350	662
		Total	7,946,838	905
	Seagrass*	Seagrass	34,000,000	
	Unknown	(blank)	474,560	36,957
	TOTAL		112,551,032	

*Note: This data is taken from the followign report, rather than from GIS analysis provided by Viridian: McWilliams, J.P., 2005. Implications of climate change for biodiversity in the UK Overseas Territories. JNCC.

Natural Capital Stocks Baseline 2017/2018					
Item		Value	Unit	Source	Notes
Carbon Storage	Total	1498608.547	tCO2e	See Carbon Retention tab.	The calcualtions for these carbon storage values are presented in Carbon Retention tab.
	Of which				
	Agriculture	37,620			
	Bare	23,415			
	Beach	13,969			
	Drought deciduous forest	333			
	Mangrove	28,499			
	Salt pond	38,196			
	Scrub	1,145,326			
	Thicket	174,989			
	Urban	36,261			
Species	Lesser Antillean iguana (<i>Iguana delicatissima</i>)	300	Count	Knapp, C., Breuil, M., Rodrigues, C., and Iverson, J. (eds.) (2014). The species has not been surveyed on Island	The species has not been surveyed on Island
	Bridled Tern (<i>Onychoprion anaethetus</i>)	540			
	Sooty Tern (<i>Onychoprion fuscatus</i>)	226,000			
	Brown Booby (<i>Sula leucogaster</i>)	990			
	Least Tern (<i>Sternula antillarum</i>)	1,580			
	Laughing gull (<i>Leucophaeus atricilla</i>)	177			
	Brown pelican (<i>Pelecanus occidentalis</i>)	50			
	Common tern (<i>Sterna hirundo</i>)	5			
	Royal tern (<i>Thalasseus maximus</i>)	37			
	Green sea turtle (<i>Chelonia mydas</i>)	Nest			
	Hawksbill sea turtle (<i>Eretmochelys imbricata</i>)	Nest			
	Leatherback sea turtle (<i>Dermochelys coriacea</i>)	Nest		BEST Initiative: Saving the Sea Turtles of Anguilla (http://ec.europa.eu/environment/nature/biodiversity/best/pdf/fs_saving_sea_turtles_en.pdf)	Unable to source count data, but well cited that the turtle nests on the island

Physical Account

Benefit	Indicator		Baseline year	Units	Notes
Fisheries	Total weight	Spiny lobster (<i>panulirus argus</i>)	937,689	lbs caught per year	
		Queen Conch (<i>Strombus gigas</i>)	159,863		
		Reef fish (mixed)	1,045,884		
		Other Finish (mixed)	275,496		
		Total	2,418,933		
Agriculture	Total weight	Beets	287	lbs produced per year	
		Carrots	154		
		Corn (Maize)	5,930		
		Cucumber	10,626		
		Egg Plants	6,570		
		Limes	1,808		
		Papaw	3,064		
		Pigeon Peas	7,496		
		Pumpkin	7,937		
		Sweet Peppers	4,542		
		Sweet Potatoes	2,469		
		Tomatoes	9,017		
		Lettuce (inc. Green Cuisine)	16,400		
		Kale, Thyme, Parsely, Celery	1,058		
		Chives	2,734		
		Watermelon	2,557		
		Cassava	639		
		Stringbeans	1,146		
		Other	1,389		
		Total	85,824		
Tourism	Number of visitor nights by activity	Swimming of other water activities	167,388	Total tourist nights	
		Sunbathing / relaxing on beach	164,658		
		Boating / sailing / watercraft	39,619		
		Scuba diving	8,188		
		Snorkelling	61,041		
		Fishing	6,121		
		Golfing	10,939		
		Offshore cays	19,830		
		Horseback riding	4,404		
		Art galleries / studio	17,659		
		Museums	8,478		
		Archaeological sites or ruins	4,198		
		Bird sanctuaries / ponds	5,087		
		Hiking / Nature trail	12,138		
		Garden or botanic displays	5,087		
		Carnival & boat racing	8,044		
		Music festival (Moonsplash / reggae)	2,709		
		Bars / nightlife	48,676		
		Festival del Mar (Easter Weekend)	0		
		Anguilla Lit Fest (May)	0		
		Other	8,313		
		Total	602,575		
	Excursionists		732,655		
	Cruise passengers		1,951,033		
		Total	3,286,263		
Local Cultural Services	Number of tour attendees	ANT Heritage Tour	279	Number of tour attendees	
		ANT dates with Nature	588		
		Total	867		
Heritage Value of Salt Ponds	Local Anguilla resident population		15,045	Population	
	Road Salt Pond	377			
	Number of people within 200m	West End Pond	198		
		Total	575		
		Dry forest	37		
	By habitat type	Mangrove	763		
		Seagrass	6,738		
		Total	7,538		
Coastal Hazard Protection	Hotel closures	With natural capital	4,014	Number of lost room days	One-off value for 2018
		Without natural capital	5,138		
		Avoided closures	1,124		
	Infrastructure damage avoided	Low	(230,692)	Square feet	One-off value for 2018, based on the difference between with and without Natural capital
		Medium	239,678		
		High	87,312		
		Total	96,298		
Terrestrial Hazard Protection					

S2 Physical flow account

S2.1 Fisheries - commercial and subsistence

The aggregate estimate of fishery production on Anguilla from this worksheet provides the basis for the estimation of monetary value in S3.1.

Baseline (2018)	
	Annual
Total weight - Spiny Lobster (<i>Panulirus argus</i>)	937,689
Total weight - Queen Conch (<i>Strombus gigas</i>)	159,863
Total weight - Reef fish (mixed)	1,045,884
Total weight - Other finfish (mixed)	275,496
Total	2,418,933

Data

ID	Description	Source	Value	Unit	Note
2.1a	Caribbean Spiny Lobster	Fish Catch Data 2017 provided by Anguilla Department of Environment	375,076	38.76%	Total annual catch (lb)
	Caribbean Spotted Lobster	Fish Catch Data 2017 provided by Anguilla Department of Environment		0.00%	Total annual catch (lb)
	Conchs	Fish Catch Data 2017 provided by Anguilla Department of Environment	63,945	6.61%	Total annual catch (lb)
	Reef Fish	Fish Catch Data 2017 provided by Anguilla Department of Environment	418,354	43.24%	Total annual catch (lb)
	Snappers	Fish Catch Data 2017 provided by Anguilla Department of Environment	64,116	6.63%	Total annual catch (lb)
	Other small coastal pelagics	Fish Catch Data 2017 provided by Anguilla Department of Environment		0.00%	Total annual catch (lb)
	S.. Pelagics	Fish Catch Data 2017 provided by Anguilla Department of Environment		0.00%	Total annual catch (lb)
	L. Pelagics	Fish Catch Data 2017 provided by Anguilla Department of Environment	46,083	4.76%	Total annual catch (lb)
	Total		967,573	100.00%	
2.1b	Proportion of fish caught for artisanal use	Ramdeen et al. (2014) Reconstruction of total marine fisheries catches for Anguilla, and Anguilla Fisheries Development Plan, Department of Fisheries and Marine Resources	0.4		Proportion
2.1c	Proportion of fish caught for subsistence	Ramdeen et al. (2014) Reconstruction of total marine fisheries catches for Anguilla, and Anguilla Fisheries Development Plan, Department of Fisheries and Marine Resources	0.6		Proportion
2.1d	Proportion of finfish caught for export	Ramdeen et al. (2014) Reconstruction of total marine fisheries catches for Anguilla, and Anguilla Fisheries Development Plan, Department of Fisheries and Marine Resources	0.1		Proportion
2.1e	Proportion of lobster caught for export	Ramdeen et al. (2014) Reconstruction of total marine fisheries catches for Anguilla, and Anguilla Fisheries Development Plan, Department of Fisheries and Marine Resources	0.1		Proportion
2.1f	Proportion of Conch caught for export	Anguilla Fisheries Development Plan, Department of Fisheries and Marine Resources	0		Proportion
					Conch is protected under CITES

Assumptions

ID	Description	Explanation
2.1g	Reported landings	Based on the findings of Ramdeen et al., we assume reproto landings equate to 40% the total landings on island
2.1h	Domestic and export quantities	Domestic and export quantities are assumed to apply similarly to all species of lobster and finfish
2.1i	Export on Queen Conch	Although some export of Queen Conch is permitted under licensed agreements, data is sparse due to limited catches each year, so quantity assumed to be negligible. As such, due to CITES legislation, Queen Conch is assumed to not be exported.
2.1j	Future quantities	Due to lack of data to indicate otherwise, quantities of fish catch are assumed to be stable over the assessment period.
2.1k	Tourism recreational catches	In not accounting for recreational catches made by tourists, we implicitly assume no catches or landings
2.1l	Foreign catches in Anguilla EEZ	In not accounting for the catches made by foreign fleets within the Anguilla EEZ, we implicitly assume they make no catches or landings

Steps

Step	Description	Data/Assumptions used	Explanation
2.1.1	Calculate export weight	2.1a, 2.1d, 2.1e, 2.1f, 2.1g, 2.1h, 2.1i	Multiply landings data of key species by annual export proportions
2.1.2	Calculate domestic weight	2.1a, 2.1d, 2.1e, 2.1f	Multiply landings data of key species by annual domestic use proportions
2.1.3	Calculate subsistence weight	2.1a, 2.1c, 2.1g	Multiply landings data of key species by annual subsistence proportions
2.1.4	25 year assessment	2.1a - 2.1f, 2.1j	Take estimates for the quantity of each type of fish caught and stream over the assessment period

S2 Physical flow account

S2.2 Agriculture

The aggregate estimate of agricultural production on Anguilla from this worksheet provides the basis for the estimation of monetary value in S3.2.

Baseline (2018)	
	Annual
Beets	287
Carrots	154
Corn (Maize)	5,930
Cucumber	10,626
Egg Plants	6,570
Limes	1,808
Papaw	3,064
Pigeon Peas	7,496
Pumpkin	7,937 lbs
Sweet Peppers	4,542
Sweet Potatoes	2,469
Tomatoes	9,017
Lettuce (inc. Green Cuisine)	16,400
Kale, Thyme, Parsely, Celery	1,058
Chives	2,734
Watermelon	2,557
Cassava	639
Stringbeans	1,146
Other	1,389
Total	85,824

Data					
ID	Description	Source	Value	Unit	Note
2.2a	Beets	Gross Output from Crops 2017 (provided by Anguilla Department of Environment)	0.13	t/yr	
2.2b	Carrots	Gross Output from Crops	0.07		
2.2c	Corn (Maize)	Gross Output from Crops	2.69		
2.2d	Cucumber	Gross Output from Crops	4.82		
2.2e	Egg Plants	Gross Output from Crops	2.98		
2.2f	Limes	Gross Output from Crops	0.82		
2.2g	Papaw	Gross Output from Crops	1.39		
2.2h	Pigeon Peas	Gross Output from Crops	3.40		
2.2i	Pumpkin	Gross Output from Crops	3.60		
2.2j	Sweet Peppers	Gross Output from Crops	2.06		
2.2k	Sweet Potatoes	Gross Output from Crops	1.12	heads	
2.2l	Tomatoes	Gross Output from Crops	4.09		
2.2m	Lettuce (inc. Green Cuisine)	Gross Output from Crops	16,400.00		
2.2n	Kale, Thyme, Parsely, Celery	Gross Output from Crops	0.48		
2.2o	Chives	Gross Output from Crops	1.24		
2.2p	Watermelon	Gross Output from Crops	1.16		
2.2q	Cassava	Gross Output from Crops	0.29		
2.2r	Stringbeans	Gross Output from Crops	0.52		
2.2s	Other	Gross Output from Crops	0.63		
2.2t	Weight conversion - tonne to lb	Google (https://www.google.com/sea)	2,204.62	multiplier	
2.2u	Weight conversion - head of lettuce to lb	Assumption	1.00		

Assumptions

ID	Description	Explanation
2.2u	Produce quantities assumed to be stable over time	Due to lack of data to indicate otherwise, quantities of produce are assumed to be stable over the assessment period
2.2v	Head of lettuce weight approximately 1lb	As indicated by the data provided (total value of lettuce yield and the price per lb of lettuce), a head of lettuce is assumed to weight 1lb.

Steps

Step	Description	Data/Assumptions used	Explanation
2.2.1	Convert tonnes to lb	2.2a-2.2t	Apply conversion factor to quantities of agricultural produce
2.2.2	Calculate quantities for each type of produce	2.2a-2.2s	Take estimates for the quantity of each type of produce reported and stream over assessment period
2.2.3	25 year assesment	2.2a - 2.2v	Take estiamtes for the quantities of agricultural produce and stream over the assesment period

Calculations - Annual lbs		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Year (chron)	Year (project)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Beets	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	287	
Carrots	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	154	
Corn (Maize)	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930	5,930		
Cucumber	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626	10,626		
Egg Plants	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570	6,570		
Limes	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808	1,808		
Pap -	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Papaw	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064	3,064		
Pigeon Peas	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496	7,496		
Pumpkin	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937	7,937		
Sweet Peppers	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542	4,542		
Sweet Potatoes	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469		
Tomatoes	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017	9,017		
Lettuce (inc. Green Cuisine)	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400	16,400		
Kale, Thyme, Parsely, Celery	1,058	1,058																								

S2 Physical flow account

S2.3 Tourism

The acreage estimate of tourism nights from this worksheet provides the basis for the estimation of monetary value in S3.3.

Baseline (2018)		
	Annual	
Swimming of other water activities	167,388	
Sunbathing / relaxing on beach	164,658	
Boating / sailing / watercraft	38,619	
Scuba diving	8,168	
Snorkeling	61,041	
Fishing	6,121	
Golfing	10,939	
Offshore cays	19,830	
Horseback riding	4,404	
Art galleries / studio	17,659	
Museums	8,478	
Tourist nights by activity		
Archaeological sites or ruins	4,198	
Bird sanctuaries / ponds	5,087	Number
Hiking / Nature trail	12,138	
Garden or botanic displays	5,087	
Carnival & boat racing	8,044	
Music festival (Moonsplash / reggae)	2,709	
Bars / nightife	48,676	
Festival del Mar (Easter Weekend)	-	
Anguilla Lit Fest (May)		
Other	8,313	
Total tourist nights	602,575	
Total excursionists	732,655	
Total cruise passengers	1,951,033	
Total visits	3,286,263	

Data

ID	Description	Source	Value	Unit	Note
2.3a	First Quarter Second Quarter Third Quarter Fourth Quarter Total	Tourist arrivals Excursionist Arrivals Cruise Passenger Arrivals Tourist arrivals by length of stay	24,445 23,449 15,863 4,497 68,254	Number of people	Tourist is understood to mean an overnight visitor
2.3b	First Quarter Second Quarter Third Quarter Fourth Quarter Total		31,681 26,353 21,470 2,920 82,424		Excursionist is understood as a person who arrives via cruise and visits the island (possibly for a day but does not stay overnight).
2.3c	First Quarter Second Quarter Third Quarter Fourth Quarter Total		75,283 71,098 55,146 20,269 221,796		Cruise visitor is understood to refer to those who who arrive by cruise but do not alight to visit the island. They are excluded from the analysis
2.3d	First Quarter Second Quarter Third Quarter Fourth Quarter Total		10.1 8.0 8.3 8.1 .8.6	Number of days	2018 Average
2.3e	Swimming of other water activities Sunbathing / relaxing on beach Boating / sailing / watercraft Scuba diving Snorkelling Fishing Golfing Offshore cays Horseback riding Art galleries / studio Museums Archaeological sites or ruins Bird sanctuaries / ponds Hiking / Nature trail Garden or botanic displays Carnival & boat racing Music festival (Moonsplash / reggae) Bars / nightlife Festival del Mar (Easter Weekend) Anguilla Lit Fest (May) Other Total		8,095 7,983 1,916 395 2,952 296 529 959 213 854 410 203 246 587 246 389 131 2,354 0 0 402		
		Activities _Jan 2019 (provided by Anguilla DoE)	29,141	100%	Number and as proportion of total 2014

Assumptions

ID	Description	Explanation
2.3f	Definition of cruise passenger	Based on our interpretation of the data, we assume that 'cruise passengers' refer to those who arrive at Anguilla but do not leave the cruise ship
2.3g	Definition of excursionist	Based on our interpretation of the data, we assume that 'excursionists' refers to cruise ships passengers who leave the ship to visit the island

Steps

Step	Description	Data/Assumptions used	Explanation
2.3.1	Calculate total visitor nights	2.3a-2.3d	Multiply visitor arrivals by average length of stay to calculate to total length of stay. Sum to find total
2.3.2	Calculate visitor nights by activity	2.3.1, 2.3e	Apply total number of visitors to proportion of total visits by activity, to find the total number of visitor nights by activity
2.3.3	25 year assessment	2.3.2, 2.3e	Take estimates of visitor night by activity and stream over assessment period

Calculations - Annual

S2 Physical flow account

S2.4 Local cultural services

The aggregate estimate of local cultural services provided by natural capital on Anguilla from this worksheet provides the basis for the estimation of monetary value in S3.4.

Baseline (2018)		
Annual		
Number of tour attendees - ANT Heritage Tour	279	
Number of tour attendees - ANT Dates with Nature	588	2017 attendees
Number of tour attendees - Total	867	
Local Anguilla Resident Population	15,045	Number

Data					
ID	Description	Source	Value	Unit	Notes
2.4a	ANT Heritage Site Tour	Anguilla National Trust (provided by Anguilla Depart	279		
2.4b	ANT dates with Nature	Anguilla National Trust (provided by Anguilla Depart	588		
2.4c	Anguilla Population - 2017	Worldometers - from UN data (http://www.worldometers.info/world-population/anguilla-population/)	14,909	Number	
	Anguilla Population - 2018		15,045		
	Anguilla Population - 2020		15,283		
	Anguilla Population - 2025		15,644		
	Anguilla Population - 2030		15,867		
	Anguilla Population - 2035		15,977		
	Anguilla Population - 2040		15,960		
	Anguilla Population - 2045		15,852		
	Anguilla Population - 2050		15,649		
	Number of cycle journeys / members of the				For future iterations of the account, if data becomes available or if it is possible to conduct surveys
	Number of sailing trips / members of the Anguilla				For future iterations of the account, if data becomes available or if it is possible to conduct surveys
	Beach cricket games / members of cricket clubs et				For future iterations of the account, if data becomes available or if it is possible to conduct surveys

Assumptions		
ID	Description	Explanation
2.4d	Assume number of tour attendees remain constant	Due to data available, assume that the number of tour attendees remains constant
2.4e	Assumed population growth rate	Assume population growth rate is satisfactory and applicable

Steps			
Step	Description	Data/Assumptions used	Explanation
For ANT tour calculations			
2.4.1	25 year assesment	2.4a, 2.4b	Take estimates for the number of tour attendees and stream over the assesment period
For WTP for local cultural services calculations			
2.4.2	Calculate population across 25 year period	2.4c	Take 5 year population estimates, proportionally increase over intervening years

Calculations														
Year (chron)	2018	2019	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
Year (project)	0	1	2	3	4	5	6	7	8	9	10	11	12	13
ANT Heritage Tour Attendees	279	279	279	279	279	279	279	279	279	279	279	279	279	279
ANT Dates with Nature Attendees	588	588	588	588	588	588	588	588	588	588	588	588	588	588
Anguilla Population	15,045	15,124	15,204	15,283	15,355	15,427	15,500	15,572	15,644	15,689	15,733	15,778	15,822	15,867

Calculations															
Year (chron)	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Year (project)	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28
ANT Heritage Tour Attendees	279	279	279	279	279	279	279	279	279	279	279	279	279	279	
ANT Dates with Nature Attendees	588	588	588	588	588	588	588	588	588	588	588	588	588	588	
Anguilla Population	15,889	15,911	15,933	15,955	15977	15,974	15,970	15,967	15,963	15960	15938.4	15916.8	15895.2	15873.6	15852

S2 Physical flow account

S2.5 Heritage Salt Ponds

The aggregate estimate of local cultural services provided by natural capital on Anguilla from this worksheet provides the basis for the estimation of monetary value in S3.5.

Baseline (2018)			
			Annual
Number of people within 200m of salt heritage ponds	Road Salt Pond		377
	West End Pond		198
Total			575

Data

ID	Description	Source	Value		Unit	Notes	
2.5a	Salt Pond		Features	Buildings within 200m		Features' refers to historic structures that are culturally significant.	
	Road Salt Pond	Heritage value of Long Pond (provided by Viridian Logic)	Many	137	Count		
	Long Pond	Heritage value of Road Salt Pond (provided by Viridian Logic)	Few	45			
	Rendezvous Salt Pond	Heritage value of Rendezvous Bay Salt Pond (provided by Viridi	Few	44			
	Meads Bay Pond	Heritage Value of Meads Bay Pond (provided by Viridian Logic)	Few	181			
	West End Pond	Heritage Value of West End Pond (provided by Viridian Logic)	Many	72			
2.5b	Household size	Ministry of Finance, Economic Development Investment, Comm	2.75		Proportion	Average	

Assumptions

ID	Description	Explanation
2.5c	All 'buildings' are homes	Assume all items described as 'buildings' are homes
2.5d	200m buffer	Assume 200m buffer is appropriate to account for aspects such as amenity, accessibility, line of sight etc.
2.5e	Only ponds with 'many' features are of interest	Only ponds that are identified as having 'many' historical features are of interest to this study, ponds with 'few' features are not likely to produce heritage benefits
2.5f	Household size	Assume average household size is applicable
2.5g	Household size remains constant	Assume household size remains constant over the assessment period

Steps

Step	Description	Data/Assumptions used	Explanation
2.5.1	Calculate number of people within 200m of heritage ponds	2.5a, 2.5b, 2.5c, 2.5d, 2.5e, 2.5f	Multiply number of homes by average household size
2.5.2	25 year assesment	2.5.1, 2.5g	

Calculations

Calculations

S2 Physical flow account

S2.6 Carbon Sequestration

The aggregate estimate of carbon sequestration on Anguilla from this worksheet provides the basis for the estimation of monetary value in S3.7.

	Baseline (2018)	Annual
Bare ground		-
Beach		-
Buildings		-
Cultivated land		-
Developed Land		-
Disturbed area		-
Dry forest		37
Ironshore		-
Mangrove		763
Open Water		-
Recreation		-
Road		-
Scrub		-
Thicket		-
Seagrass		6,738
Unknown		-
Total		7,538

Data								
ID	Description	Source	Value					Note
2.6a	Carbon sequestration values for Anguilla habitats		Anguilla Habitat	Area (m ²)	Area (ha)	Carbon sequestration rate (from data source)	Unit	Carbon sequestration rate (tCO ₂ e/ha/yr)
		Bare ground	3,190,116	319				
		Beach	1,522,543	152				
		Buildings	1,919,022	192				
		Cultivated land	2,928,763	293				
		Developed Land	443,222	44				
		Disturbed area	3,225,776	323				
	Soepadmo, E., 1993. Tropical rainforest carbon sequestration rates	Dry forest	18,120	2	5.5	tC/ha/yr	20.19	Sequestration rate of subtropical dry forests, based on a range of regions across the world.
		Ironshore	2,201,295	220				
	Alongi, D.M., 2012. Carbon sequestration rates of mangroves	Mangrove	1,194,680	119	174	gC/m ² /yr	6.39	Global mangrove study.
		Open Water	2,973,613	297				
		Recreation	397,119	40				
		Road	2,577,944	258				
		Scrub	48,011,980	4,801				
		Thicket	7,946,838	795				
	Alongi, D.M., 2012. Carbon sequestration rates of seagrass	Seagrass	34,000,000	3,400	54	gC/m ² /yr	1.98	
		Unknown	474,560	47				
2.6b	Gram to tonne conversion factor		0.000001					
2.6c	m ² to ha conversion factor		10000					
2.6d	tC to tCO ₂ e conversion factor		3.67					

Assumptions		
ID	Description	Explanation
2.6d	Sequestration is constant over assessment period	Due to data available, it is assumed that quantities of carbon sequestered remain constant over assessment period
2.6e	Carbon sequestration of other habitat types	By not being able to identify and calculate appropriate sequestration volumes for other habitat types, it is implicitly assumed that there is no carbon sequestered by other habitats.

Steps			
Step	Description	Data/Assumptions used	Explanation
2.6.1	Where necessary, convert conversions factors from gC/m ² /yr into tCO ₂ e/ha/yr	2.6a, 2.6b, 2.6c	Convert gC/m ² to tCO ₂ e/ha by multiplying the initial sequestration rate (2.6a) by gram to tonnes conversion factor (2.6b), by "m ² to ha" conversion factor (2.6c).
2.6.2	Where necessary, convert conversions factors from tC/ha/yr to tCO ₂ e/ha	2.6d	Convert tC/ha to tCO ₂ e by multiplying by the tCO ₂ e conversion factor (2.6d).
2.6.3	Calculate quantity of carbon equivalent sequestered by	2.6a	Apply appropriate adjusted sequestration rates to respective habitat areas (2.6a) to calculate the quantity of carbon equivalent sequestered by each habitat.

S2 Physical flow account

S2.7 Coastal Hazard Defence

The aggregate estimate of coastal hazard protection on Anguilla from this worksheet provides the basis for the estimation of monetary value in S3.9.

Baseline (2017/18)			
		One-off value	
Hotel closures			
With natural capital		4,014	Number of lost room days
Without natural capital		5,138	Number of lost room days
Avoided closures		1,124	Number of lost room days
Infrastructure damage			
With natural capital	Low	1,266,202	Square feet
	Medium	790,573	Square feet
	High	206,813	Square feet
Without natural capital	Low	1,035,508	Square feet
	Medium	1,030,251	Square feet
	High	294,125	Square feet
Avoided damage	Low	(230,692)	Square feet
	Medium	239,678	Square feet
	High	87,312	Square feet

Data

ID	Description	Source	Value				Unit	Note	
2.7a	Number of hotels identified as closed	per comms Anguilla Department of Environment ('Copy of Eftec Hotel log (002)-EDIT_22022019.xls')	13				Count	Mallouhana Resort was identified as closed by the DOE; however the AHTA could not provide the number of rooms associated with this closure. Therefore estimates do not include the closure of the Mallouhana.	
2.7b	Number of rooms in each hotel	Anguilla Hotel and Tourism Association. http://www.anguillahotel.com/AHT_A_Members.html	Hotel ID 3 9 14 28 33 35 38 39 41 42 43 44 52 Total	Number of rooms 17 16 65 9 23 400 15 98 29 80 93 28 31 904			Count	Hotel ID is from eftec hotel log, part of which has been shared with Anguilla Department of Environment ('Copy of Eftec Hotel log (002)-EDIT_22022019.xls').	
2.7c	Total number of months closed	per comms Anguilla Department of Environment ('Copy of Eftec Hotel log (002)-EDIT_22022019.xls') and Assumptions 2.8f and 2.8g	Hotel ID 3 9 14 28 33 35 38 39 41 42 43 44 52	Total number of months closed Still closed Still closed 13 4 14 14 14 15 1 7 14 14 Still closed			Count	Hotel ID is from eftec hotel log, part of which has been shared with Anguilla Department of Environment ('Copy of Eftec Hotel log (002)-EDIT_22022019.xls').	
2.7d	Number of months and days closed in year	Assumptions 2.8f and 2.8h	Hotel ID 3 9 14 28 33 35 38 39 41 42 43 44 52	Number of months closed in a year 12 12 12 4 12 12 12 12 1 7 12 12 12	Number of days closed in a year 365 365 365 122 365 365 365 365 30 212 365 365 365	Total 132	4,014	Hotel ID is from eftec hotel log, part of which has been shared with Anguilla Department of Environment ('Copy of Eftec Hotel log (002)-EDIT_22022019.xls').	
2.7e	Hotel location	Google maps search conducted by eftec	Hotel ID 3 9 14 28 33 35 38 39 41 42 43 44 52	Near-shore hotel (Y/N) Y Y Y Y Y Y Y Y N Y N Y N			Count	Hotel ID is from eftec hotel log, part of which has been shared with Anguilla Department of Environment ('Copy of Eftec Hotel log (002)-EDIT_22022019.xls').	
2.7f	Number of buildings in each storm surge zone and associated risk category	Viridian GIS analysis	Storm Surge Zone 0 1 2 3 4 5 6 7 8 9 10	Risk level No risk Low Low Low Medium Medium Medium Medium High High High	With Natural Capital 6,770 185 235 112 73 88 81 52 59 4 22	Without Natural Capital 131 116 227 138 132 76 64 81 81 36 26	Total 7,681	1,047	Scale 0-10 reflects risk of storm surge, where 0 represents no risk and 10 represents high risk.
2.7g	Sum of square feet in each storm surge zone and associated risk category	Viridian GIS analysis	Storm Surge Zone 0 1 2 3 4 5 6 7 8 9 10	Risk level No risk Low Low Low Medium Medium Medium Medium High High High	With Natural Capital 15,711,140 389,921 598,965 278,316 158,649 281,583 221,265 129,077 105,485 18,601 82,726	Without Natural Capital 235,992 249,919 550,598 292,001 385,017 198,100 145,121 72,899 76,105	Total at risk 2,263,587	2,359,885	Scale 0-10 reflects risk of storm surge, where 0 represents no risk and 10 represents high risk.

Assumptions

Assumptions			
ID	Description	Source	Explanation
2.7h	06/09/2017	Economic Commission for Latin America and the Caribbean	Assume closure started after Hurricane Irma made landfall on Anguilla.
2.7i	31/12/2018		Total closure is only accounted for until the end of 2018. Hotels that were identified as 'Still Closed' by the Department of environment are only being estimated until this date.
2.7j	06/09/2018		NCA is an annual account, therefore only accounting for maximum of 12 months closure. Therefore those hotels that are identified as 'Still Closed' or that were closed for over 12 months, are only being considered closed until one year following Hurricane Irma made landfall.
2.7k	28%	Viridian GIS analysis	Assumption on natural capital protection estimated as the total damage costs in the degraded scenario, divided by the total damage costs in the baseline (with natural capital) scenario. Indicates how much worse damage would be without any natural capital. The change in damage costs has been used, rather than the change in damaged extent, as it reflects both the extent and severity of damages sustained. This can be adjusted in the future to reflect better information/data. Based on Viridian GIS modelling of storm surge zones.

Steps

Step	Description	Data/Assumptions used	Explanation
Hotel closures			
2.7.1	Estimate the number of months and days closed in a year	2.7.c, 2.7h, 2.7i and 2.7j	Based on the total number of months closed (2.7c), estimate the number of months and days closed in the year following the landfall of hurricane Irma (assumptions 2.7h, 2.7i and 2.7j). This provides the number of lost room days in a year, and is a one-off value (2.7d). This value is also the number of lost room days with natural capital
2.7.2	Estimate the number of lost room days in a year without Natural Capital	2.7d and 2.7k	To estimate the annual damages if there was no Natural Capital on Anguilla, take the number of lost rooms days in a year and multiply it by the assumed proportion of protection that is attributable to natural capital (2.7k). Calculations shown below.
2.7.3	Estimate the avoided hotel closures	Step 2.7.1 and 2.7.2	Subtract the estimated annual values with Natural Capital (2.7.2) from the estimated annual values without Natural Capital (2.7.3). Calculations shown below.
2.7.4	Determine hotel location	2.7a, 2.7e	Based on a google map search of the locations of the 13 hotels identified (2.7a), group hotels as either coastal (e.g. beach resorts) or non-coastal (e.g. inland hotels) (2.7e)
Infrastructure damage			
2.7.5	Estimate the square foot impact in each storm surge zone, with and without natural capital	2.7g	Based on GIS analysis, storm surge zones are determined and the total square feet of infrastructure within each zone is summed, for both with and without natural capital (2.7g). Produce estimates for low, medium and high risk levels (shown below).
2.7.6	Estimate the avoided infrastructure damage	Step 2.7.6	Subtract the estimated total square feet affected with Natural Capital from the estimated total square feet affected without Natural Capital. Calculations shown below.
2.7.1			

Calculations - Annual

Calculations - Annual

S2 Physical flow account

S2.8 Terrestrial Hazard Defence

The aggregate estimate of terrestrial hazard protection on Anguilla from this worksheet provides the basis for the estimation of monetary value in S3.10.

Data					
ID	Description	Source	Value	Unit	Note
2.10a					
2.10b					
2.10c					
2.10d					
2.10e					

Assumptions		
ID	Description	Explanation

Steps			
Step	Description	Data/Assump	Explanation
2.10.1			

Monetary Account

Benefit	Indicator	Baseline year (EC\$)	PV 25 (EC\$)	Notes
Fisheries	Total value by species	Spiny lobster (<i>panulirus argus</i>)	\$ 17,785,004	\$ 303,383,138
		Queen Conch (<i>Strombus gigas</i>)	\$ 2,165,315	\$ 36,936,747
		Reef fish (mixed)	\$ 14,166,360	\$ 241,654,977
		Other Finfish (mixed)	\$ 5,225,295	\$ 89,135,004
		Total	\$ 39,341,975	\$ 671,109,866
				East Caribbean Dollar
Agriculture	Total value by agricultural produce	Beets	\$ 1,011	\$ 17,245
		Carrots	\$ 700	\$ 11,939
		Corn (Maize)	\$ 29,884	\$ 509,764
		Cucumber	\$ 53,546	\$ 913,407
		Egg Plants	\$ 33,767	\$ 576,015
		Limes	\$ 7,288	\$ 124,314
		Papaw	\$ 12,353	\$ 210,728
		Pigeon Peas	\$ 52,879	\$ 902,036
		Pumpkin	\$ 23,996	\$ 409,327
		Sweet Peppers	\$ 22,885	\$ 390,377
		Sweet Potatoes	\$ 9,954	\$ 169,795
		Tomatoes	\$ 45,436	\$ 775,069
		Lettuce (inc. Green Cuisine)	\$ 82,640	\$ 1,409,700
		Kale, Thyme, Parsely, Celery	\$ 23,462	\$ 400,231
		Chives	\$ 24,796	\$ 422,972
		Watermelon	\$ 7,732	\$ 131,894
		Cassava	\$ 2,577	\$ 43,965
		Stringbeans	\$ 3,466	\$ 59,125
		Other	\$ 5,599	\$ 95,510
		Total	\$ 443,971	\$ 7,573,413
Tourism	Value of visitor nights by activity	Swimming of other water activities	\$ 59,064,527	\$ 1,007,544,410
		Sunbathing / relaxing on beach	\$ 38,734,266	\$ 660,743,351
		Boating / sailing / watercraft	\$ 13,979,942	\$ 238,474,996
		Scuba diving	\$ 3,852,510	\$ 65,717,535
		Snorkelling	\$ 28,718,712	\$ 489,894,354
		Fishing	\$ 2,879,654	\$ 49,122,198
		Golfing	\$ 2,573,204	\$ 43,894,667
		Offshore cays	\$ 9,329,690	\$ 159,149,284
		Horseback riding	\$ 1,036,092	\$ 17,674,034
		Art galleries / studio	\$ -	\$ -
		Museums	\$ -	\$ -
		Archaeological sites or ruins	\$ 987,449	\$ 16,844,267
		Bird sanctuaries / ponds	\$ 2,393,226	\$ 40,824,530
		Hiking / Nature trail	\$ 5,710,665	\$ 97,414,629
		Garden or botanic displays	\$ 1,196,613	\$ 20,412,265
		Carnival & boat racing	\$ 1,892,205	\$ 32,277,931
		Music festival (Moonsplash / reggae)	\$ -	\$ -
		Bars / nightlife	\$ 11,450,516	\$ 195,327,119
		Festival del Mar (Easter Weekend)	\$ -	\$ -
		Anguilla Lit Fest (May)	\$ -	\$ -
		Other	\$ 10,559,380	\$ 180,125,790
		Total	\$ 194,358,654	\$ 3,315,441,360
Local Cultural Services	Value of ANT Heritage Tours	ANT Heritage Tour	\$ 9,887	\$ 168,657
		ANT dates with Nature	\$ 79,380	\$ 1,354,093
		Total ANT Tours	\$ 89,267	\$ 1,522,750
		Value of cultural services to local population	\$ 2,829,247	\$ 50,136,141
Heritage				It has not been possible to monetise this benefit
Carbon Sequestration	By habitat type	Dry forest	\$ 4,047	\$ 4,964
		Mangrove	\$ 84,404	\$ 1,997,833
		Seagrass	\$ 745,474	\$ 17,645,378
		Total	\$ 833,924	\$ 19,648,176
Coastal Hazard	Hotel closures			Values are based on revenue per available room for the Caribbean region in 2018. Values represent revenue lost due to water damage.
	Avoided revenue loss	Hotel revenue lost in a year due to closure	\$ 555,502	
		Accommodation tax revenue lost	\$ 55,550	
	Infrastructure damage avoided			Values are based on the difference between with and without natural capital.
	Avoided damage	Low	-\$ 327,007	
		Medium	\$ 6,139,539	
		High	\$ 3,993,577	
		Total	\$ 9,806,110	
Terrestrial Hazard				

S3 Monetary flow account

S3.1 Fisheries

The aggregate estimates produced from this worksheet should feed into the monetary account, the balance sheet, the asset value summary.

Baseline (2018)		
	Annual Value	PV 25
Total value - Spiny Lobster (<i>Panulirus argus</i>)	\$ 17,785,004	\$ 303,383,138
Total value - Queen Conch (<i>Strombus gigas</i>)	\$ 2,165,315	\$ 36,936,747
Total value - Reef fish (mixed)	\$ 14,166,360	\$ 241,654,977 EC \$
Total value - other finfish (mixed)	\$ 5,225,295	\$ 89,135,004
Total value	\$ 39,341,975	\$ 671,109,866

Data						
ID	Description	Source	Value	Units	Year	Notes
3.1a	Caribbean Spiny Lobster	Fish Catch Data 2017 provided by Anguilla	18.82	EC\$/lb	2017	
3.1b	Caribbean Spotted Lobster	Fish Catch Data 2017 provided by Anguilla	18.82	EC\$/lb	2017	
3.1c	Conchs	Fish Catch Data 2017 provided by Anguilla	13.44	EC\$/lb	2017	
3.1d	Reef Fish	Fish Catch Data 2017 provided by Anguilla	13.44	EC\$/lb	2017	
3.1e	Snappers	Fish Catch Data 2017 provided by Anguilla	18.82	EC\$/lb	2017	
3.1f	Other small coastal pelagics	Fish Catch Data 2017 provided by Anguilla	-	EC\$/lb	2017	
3.1g	S.. Pelagics (mixed)	Fish Catch Data 2017 provided by Anguilla	-	EC\$/lb	2017	
3.1h	L. Pelagics (mixed)	Fish Catch Data 2017 provided by Anguilla	18.82	EC\$/lb	2017	
3.1i	GDP deflator	East Caribbean Central Bank (https://www.eccb-centralbank.org/p/consumer-price-index)	2017 100	2018 100.7802218	Inflator 1.007802218	2018 From 'CPI Quarterly - September 2018' and re-based to September 2017.

Assumptions			
ID	Description	Source	Explanation
3.1j	Price for each species		Export and domestic price assumed to be equal (i.e. price at landing)
3.1k	Price for each species		Prices assumed to remain stable over the assessment period

Steps			
Step	Description	Data/Assumptions	Explanation
3.1.1	Calculate value for each species	3.1a-3.1h	Apply price for each species to respective quantities for species caught
3.1.2	Inflate	3.1.1, 3.1i	Data is provided in 2017 prices, so must be inflated using inflator (3.1i), to bring to 2018 prices
3.1.3	Discount	Discount factor	Apply appropriate discount factor

Calculations - Annual value																										
Year (chron)		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Year (project)		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Discount Rate		3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	
Discount Factor		1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.47	0.45	
Time horizon																										
Total export value - Spiny Lobster (<i>Panulirus argus</i>)	\$ 711,400	\$ 687,343	\$ 664,100	\$ 641,642	\$ 619,944	\$ 598,980	\$ 578,724	\$ 559,154	\$ 540,246	\$ 521,976	\$ 504,325	\$ 487,270	\$ 470,793	\$ 454,872	\$ 439,490	\$ 424,628	\$ 410,269	\$ 396,395	\$ 382,990	\$ 370,039	\$ 357,525	\$ 345,435	\$ 333,754	\$ 322,467	\$ 311,563	
Total export value - Queen Conch (<i>Strombus gigas</i>)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	
Total export value - Reef fish (mixed)	\$ 566,654	\$ 547,492	\$ 528,978	\$ 511,090	\$ 493,807	\$ 477,108	\$ 460,974	\$ 445,385	\$ 430,324	\$ 415,772	\$ 401,712	\$ 388,128	\$ 375,002	\$ 362,321	\$ 350,069	\$ 338,231	\$ 326,793	\$ 315,742	\$ 305,065	\$ 294,749	\$ 284,781	\$ 275,151	\$ 265,846	\$ 256,856	\$ 248,170	
Total export value - Other finfish (mixed)	\$ 209,012	\$ 201,944	\$ 195,115	\$ 188,517	\$ 182,142	\$ 175,982	\$ 170,031	\$ 164,281	\$ 158,726	\$ 153,358	\$ 148,172	\$ 143,162	\$ 138,321	\$ 133,643	\$ 129,124	\$ 124,757	\$ 120,538	\$ 116,462	\$ 112,524	\$ 108,719	\$ 105,042	\$ 101,490	\$ 98,058	\$ 94,742	\$ 91,538	
Total domestic value - Spiny Lobster (<i>Panulirus argus</i>)	\$ 6,402,601	\$ 6,186,088	\$ 5,976,897	\$ 5,774,780	\$ 5,579,497	\$ 5,390,819	\$ 5,208,520	\$ 5,032,387	\$ 4,862,210	\$ 4,697,787	\$ 4,538,925	\$ 4,385,434	\$ 4,237,135	\$ 4,093,850	\$ 3,955,411	\$ 3,821,653	\$ 3,692,418	\$ 3,567,554	\$ 3,446,912	\$ 3,330,350	\$ 3,217,729	\$ 3,108,917	\$ 3,003,785	\$ 2,902,207	\$ 2,804,065	
Total domestic value - Queen Conch (<i>Strombus gigas</i>)	\$ 866,126	\$ 836,837	\$ 808,538	\$ 781,196	\$ 754,779	\$ 729,255	\$ 704,594	\$ 680,767	\$ 657,746	\$ 635,504	\$ 614,013	\$ 593,249	\$ 573,188	\$ 553,805	\$ 535,077	\$ 516,983	\$ 499,500	\$ 482,609	\$ 466,289	\$ 450,520	\$ 435,285	\$ 420,566	\$ 406,344	\$ 392,603	\$ 379,326	
Total domestic value - Reef fish (mixed)	\$ 5,099,890	\$ 4,927,430	\$ 4,760,802	\$ 4,599,808	\$ 4,444,259	\$ 4,293,970	\$ 4,148,763	\$ 4,008,467	\$ 3,872,915	\$ 3,741,947	\$ 3,615,408	\$ 3,493,148	\$ 3,375,022	\$ 3,260,891	\$ 3,150,619	\$ 3,044,076	\$ 2,941,136	\$ 2,841,678	\$ 2,745,582	\$ 2,652,737	\$ 2,563,031	\$ 2,476,358	\$ 2,392,616	\$ 2,311,707	\$ 2,233,533	
Total domestic value - Other finfish (mixed)	\$ 1,881,106	\$ 1,817,494	\$ 1,756,033	\$ 1,696,650	\$ 1,639,275	\$ 1,583,841	\$ 1,530,281	\$ 1,478,532	\$ 1,428,534	\$ 1,380,226	\$ 1,333,552	\$ 1,288,456	\$ 1,244,885	\$ 1,202,787	\$ 1,162,113	\$ 1,122,815	\$ 1,084,845	\$ 1,048,159	\$ 1,012,714	\$ 978,468	\$ 945,380	\$ 882,522	\$ 852,678	\$ 823,844		
Total subsistence value - Spiny Lobster	\$ 10,671,000	\$ 10,310,147	\$ 9,961,495	\$ 9,624,633	\$ 9,299,162	\$ 8,984,698	\$ 8,680,867	\$ 8,387,311	\$ 8,103,683	\$ 7,829,645	\$ 7,564,874	\$ 7,309,057	\$ 7,061,891	\$ 6,823,083	\$ 6,592,351	\$ 6,369,421	\$ 6,154,030	\$ 5,945,923	\$ 5,744,853	\$ 5,550,583	\$ 5,362,888	\$ 5,181,528	\$ 5,006,300	\$ 4,837,012	\$ 4,673,442	
Total subsistence value - Queen Conch	\$ 1,299,189	\$ 1,255,255	\$ 1,212,807	\$ 1,171,794	\$ 1,132,168	\$ 1,093,883	\$ 1,056,891	\$ 986,619	\$ 953,255	\$ 921,020	\$ 889,874	\$ 859,782	\$ 830,707	\$ 802,615	\$ 775,474	\$ 749										

S3 Monetary flow account

S3.2 Agriculture

The aggregate estimates produced from this worksheet should feed into the monetary account, the balance sheet, the asset value summary.

Baseline (2018)		
	Annual Value	PV 25
Beets	\$ 1,011	\$ 17,245
Carrots	\$ 700	\$ 11,939
Corn (Maize)	\$ 29,884	\$ 509,764
Cucumber	\$ 53,546	\$ 913,407
Egg Plants	\$ 33,767	\$ 576,015
Limes	\$ 7,288	\$ 124,314
Papaw	\$ 12,353	\$ 210,728
Pigeon Peas	\$ 52,879	\$ 902,036
Pumpkin	\$ 23,996	\$ 409,327
Sweet Peppers	\$ 22,885	\$ 390,377
Sweet Potatoes	\$ 9,954	\$ 169,795
Tomatoes	\$ 45,436	\$ 775,069
Lettuce (inc. Green Cuisine)	\$ 82,640	\$ 1,409,700
Kale, Thyme, Parsely, Celery	\$ 23,462	\$ 400,231
Chives	\$ 24,796	\$ 422,972
Watermelon	\$ 7,732	\$ 131,894
Cassava	\$ 2,577	\$ 43,965
Stringbeans	\$ 3,466	\$ 59,125
Other	\$ 5,599	\$ 95,510
Total value	\$ 443,971	\$ 7,573,413

Data

ID	Description	Source	Value	Units	Year	Notes
3.2a	Beets	Gross Output from Crops 2017 (provided)	3.50	EC\$/lb	2017	
3.2b	Carrots	Gross Output from Crops 2017 (provided)	4.50	EC\$/lb	2017	
3.2c	Corn (Maize)	Gross Output from Crops 2017 (provided)	5.00	EC\$/lb	2017	
3.2d	Cucumber	Gross Output from Crops 2017 (provided)	5.00	EC\$/lb	2017	
3.2e	Egg Plants	Gross Output from Crops 2017 (provided)	5.10	EC\$/lb	2017	
3.2f	Limes	Gross Output from Crops 2017 (provided)	4.00	EC\$/lb	2017	
3.2g	Papaw	Gross Output from Crops 2017 (provided)	4.00	EC\$/lb	2017	
3.2h	Pigeon Peas	Gross Output from Crops 2017 (provided)	7.00	EC\$/lb	2017	
3.2i	Pumpkin	Gross Output from Crops 2017 (provided)	3.00	EC\$/lb	2017	
3.2j	Sweet Peppers	Gross Output from Crops 2017 (provided)	5.00	EC\$/lb	2017	
3.2k	Sweet Potatoes	Gross Output from Crops 2017 (provided)	4.00	EC\$/lb	2017	
3.2l	Tomatoes	Gross Output from Crops 2017 (provided)	5.00	EC\$/lb	2017	
3.2m	Lettuce (inc. Green Cuisine)	Gross Output from Crops 2017 (provided)	5.00	EC\$/lb	2017	
3.2n	Kale, Thyme, Parsely, Celery	Gross Output from Crops 2017 (provided)	22.00	EC\$/lb	2017	
3.2o	Chives	Gross Output from Crops 2017 (provided)	9.00	EC\$/lb	2017	
3.2p	Watermelon	Gross Output from Crops 2017 (provided)	3.00	EC\$/lb	2017	
3.2q	Cassava	Gross Output from Crops 2017 (provided)	4.00	EC\$/lb	2017	
3.2r	Stringbeans	Gross Output from Crops 2017 (provided)	3.00	EC\$/lb	2017	
3.2s	Other	Gross Output from Crops 2017 (provided)	4.00	EC\$/lb	2017	
3.2t	GDP Deflator	East Caribbean Central Bank (https://www.ecb-centralbank.org/nrh/consumers/cpi-a-index)	2017 100.00	2018 100.78	Inflator 1.01	2018 From 'CPI Quarterly - September 2018' and re-based to September 2017.

Assumptions

ID	Description	Source	Explanation
3.2t	Stable prices for produce	The prices paid for produce are assumed to remain stable over the assessment period	

Steps

Step	Description	Data/Assumpt	Explanation
3.2.1	Calculate value for each type of produce	3.2a-3.2s	Apply price for each type of produce to respective quantities for each type of produce
3.2.2	Inflate	3.2.1, 3.2t	Data is provided in 2017 prices, so must be inflated using inflator (3.2t), to bring to 2018 prices
3.2.3	Discount	Discount factor	Apply appropriate discount factor

Calculations - Annual value		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	
Year (chron)																											
Year (project)		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Discount Rate		3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	
Discount Factor		1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44	
Time horizon		25																									
Beets	\$ 1,011	\$ 977	\$ 944	\$ 912	\$ 881	\$ 851	\$ 822	\$ 795	\$ 768	\$ 742	\$ 717	\$ 692	\$ 669	\$ 646	\$ 625	\$ 603	\$ 583	\$ 563	\$ 544	\$ 526	\$ 508	\$ 491	\$ 474	\$ 458	\$ 443		
Carrots	\$ 700	\$ 676	\$ 653	\$ 631	\$ 610	\$ 589	\$ 569	\$ 550	\$ 531	\$ 514	\$ 496	\$ 479	\$ 463	\$ 448	\$ 432	\$ 418	\$ 404	\$ 390	\$ 377	\$ 364	\$ 352	\$ 340	\$ 328	\$ 317	\$ 307		
Corn (Maize)	\$ 29,884	\$ 28,873	\$ 27,897	\$ 26,953	\$ 26,042	\$ 25,161	\$ 24,310	\$ 23,488	\$ 22,694	\$ 21,926	\$ 21,185	\$ 20,469	\$ 19,776	\$ 19,108	\$ 18,462	\$ 17,837	\$ 17,234	\$ 16,651	\$ 16,089	\$ 15,544	\$ 15,018	\$ 14,511	\$ 14,020	\$ 13,546	\$ 13,088		
Cucumber	\$ 53,546	\$ 51,735	\$ 49,986	\$ 48,295	\$ 46,662	\$ 45,360	\$ 42,087	\$ 40,663	\$ 39,288	\$ 37,960	\$ 36,676	\$ 35,436	\$ 34,238	\$ 33,080	\$ 31,961	\$ 30,880	\$ 29,836	\$ 28,827	\$ 27,852	\$ 26,910	\$ 26,000	\$ 25,121	\$ 24,272	\$ 23,451			
Egg Plants	\$ 33,767	\$ 32,625	\$ 31,522	\$ 30,456	\$ 29,426	\$ 28,431	\$ 27,470	\$ 26,541	\$ 25,643	\$ 24,776	\$ 23,938	\$ 23,129	\$ 22,347	\$ 21,591	\$ 20,861	\$ 19,474	\$ 18,815	\$ 17,564	\$ 16,970	\$ 16,396	\$ 15,842	\$ 15,306	\$ 14,789				
Limes	\$ 7,288	\$ 7,041	\$ 6,803	\$ 6,573	\$ 6,351	\$ 6,136	\$ 5,928	\$ 5,728	\$ 5,534	\$ 5,347	\$ 5,166	\$ 4,992	\$ 4,823	\$ 4,660	\$ 4,502	\$ 4,350	\$ 4,203	\$ 4,061	\$ 3,923	\$ 3,791	\$ 3,662	\$ 3,539	\$ 3,419	\$ 3,303	\$ 3,192		
Papaw	\$ 12,353	\$ 11,936	\$ 11,532	\$ 11,142	\$ 10,765	\$ 10,401	\$ 10,049	\$ 9,710	\$ 9,381	\$ 9,064	\$ 8,755	\$ 8,461	\$ 8,175	\$ 7,899	\$ 7,632	\$ 7,374	\$ 7,124	\$ 6,883	\$ 6,651	\$ 6,426	\$ 6,208	\$ 5,998	\$ 5,796	\$ 5,600	\$ 5,410		
Pigeon Peas	\$ 52,879	\$ 51,091	\$ 49,363	\$ 47,694	\$ 46,081	\$ 44,523	\$ 43,017	\$ 41,563	\$ 40,157	\$ 38,799	\$ 37,487	\$ 36,225	\$ 34,995	\$ 33,811	\$ 32,668	\$ 31,563	\$ 30,496	\$ 29,465	\$ 28,465	\$ 27,506	\$ 26,575	\$ 25,677	\$ 24,808	\$ 23,969	\$ 23,159		
Pumpkin	\$ 23,998	\$ 23,194	\$ 22,400	\$ 21,643	\$ 20,911	\$ 20,204	\$ 19,521	\$ 18,860	\$ 18,223	\$ 17,608	\$ 17,011	\$ 16															

S3. Monetary flow account

S3.3.Tourism

The aggregate estimates produced from this worksheet should feed into the monetary account, the balance sheet, the asset value summary.

Baseline (2018)		
	Annual Value	PV 25
Swimming or other water activities	\$ 59,064,527	\$ 1,007,544,410
Sunbathing / relaxing on beach	\$ 38,734,266	\$ 660,743,351
Boating / sailing / watercraft	\$ 13,979,942	\$ 238,474,996
Scuba diving	\$ 3,000,000	\$ 65,717,535
Snorkeling	\$ 2,000,716,712	\$ 43,894,364
Fishing	\$ 2,076,654	\$ 49,122,198
Golfing	\$ 2,673,204	\$ 43,894,667
Offshore cays	\$ 9,328,690	\$ 159,149,284
Horseback riding	\$ 1,036,092	\$ 17,674,034
Art galleries / studio	\$ -	\$ -
Museums	\$ -	\$ -
Archaeological sites or ruins	\$ 987,449	\$ 16,844,267
Bird sanctuaries / ponds	\$ 2,393,226	\$ 40,824,530
Hiking / Nature trail	\$ 5,710,665	\$ 97,414,629
Garden or botanic displays	\$ 1,196,613	\$ 20,412,265
Carnival & boat racing	\$ 1,892,205	\$ 32,277,931
Music festival (Moonsplash / reggae)	\$ -	\$ -
Bars / nightife	\$ 11,450,516	\$ 195,327,119
Festival del Mar (Easter Weekend)	\$ -	\$ -
Anguilla Lit Fest (May)	\$ -	\$ -
Other	\$ 10,559,380	\$ 180,125,790
Total	\$ 194,358,654	\$ 3,315,441,360

Data						
ID	Description	Source	Value	Units	Date Year	Notes
3.3a	Estimated visitor expenditure by quarter					
	First quarter		\$ 24,700,000			
	Second quarter		\$ 23,400,000			
	Third Quarter		\$ 25,500,000			
	Fourth Quarter		\$ 33,900,000			
	Total	Copy of Data Request - 20190213 - Tourism Expenditure.xls' Provided by Anguilla DoE	\$ 107,560,000	US \$	2018	
3.3b	Estimated visitor expenditure by type of visitor					
	Tourist		\$ 105,000,000			
	Excursionist		\$ 2,500,000			
	Total		\$ 107,560,000			
3.3c						
	Swimming/other activities		75%			
	Sunbathing / relaxing on beach		50%			
	Boating / Sailing / Watercraft		75%			
	Scuba diving		100%			
	Snorkeling		100%			
	Fishing		100%			
	Golfing		50%			
	Visits to offshore cays		100%			
	Horseback riding		50%			
	Art galleries / studio		50%			
	Museums		0%			
	Archaeological sites or ruins		60%			
	Bird sanctuaries / ponds		100%			
	Hiking / Nature trail		100%			
	Garden / botanic displays		50%			
	Carnival & boat racing		50%			
	Music festival (moonsplash / reggae)		0%			
	Bars / nightife		50%			
	Festival del Mar		50%			
	Anguilla Lit Fest		0%			
3.3d	Exchange rate US \$ to ECD \$	Google	2.70	Exchange rate	Average 2018 rate	
3.3e	Value per tourist night	Calculation	\$174.25	US \$	2018	
3.3f	Value per tourist night	Calculation	\$470.48	EC \$	2018	

Assumptions			
ID	Description	Source	Explanation

Steps		
Step	Description	Data/Assumptions u Explanation
3.3.1	Value per tourist night	3.3b, 2.3d, 3.3e
3.3.2	Convert to ECD	3.3e, 3.3d, 3.3f
3.3.3	Apply value per tourist night to the number of tourist nights by activity	3.3f
3.3.4	Apply factor of ecosystem dependence	3.3c
3.3.5	Discount	Discount factor

Calculations - Annual value		2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Year (chron)																										
Year (project)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	
Discount rate	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	
Discount Factor	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44	
Time Horizon	25																									
Swimming or other water activities	\$ 59,064,527	\$ 57,067,176	\$ 55,137,368	\$ 53,272,819	\$ 51,471,323	\$ 49,730,747	\$ 48,049,031	\$ 46,424,184	\$ 44,854,284	\$ 43,337,473	\$ 41,871,964	\$ 40,455,994	\$ 38,087,917	\$ 37,766,104	\$ 36,488,899	\$ 35,255,063	\$ 34,062,862	\$ 33,910,878	\$ 33,816,816	\$ 33,716,016	\$ 33,616,285	\$ 33,516,554	\$ 33,416,823	\$ 33,316,092	\$ 33,216,361	\$ 33,116,629
Sunbathing / relaxing on beach	\$ 38,734,266	\$ 37,424,412	\$ 36,158,852	\$ 34,936,089	\$ 33,754,675	\$ 32,613,213	\$ 31,510,350	\$ 30,444,783	\$ 29,415,249	\$ 28,420,531	\$ 27,459,450	\$ 26,530,870	\$ 25,633,690	\$ 24,756,851	\$ 23,929,324	\$ 23,120,120	\$ 22,338,279	\$ 21,582,879	\$ 20,853,024	\$ 20,147,849	\$ 19,465,521	\$ 18,808,233	\$ 18,161,892	\$ 17,525,550	\$ 16,908,209	\$ 16,300,868
Boating / sailing / watercraft	\$ 13,979,942	\$ 13,050,426	\$ 12,507,191	\$ 12,099,712	\$ 11,372,692	\$ 10,988,108	\$ 10,616,530	\$ 10,257,517	\$ 9,910,644	\$ 9,575,502	\$ 9,251,692	\$ 8,938,833	\$ 8,636,554	\$ 8,344,496	\$ 8,062,315	\$ 7,789,677	\$ 7,526,258	\$ 7,271,747	\$ 7,028,582	\$ 6,788,253	\$ 6,546,993	\$ 6,314,763	\$ 6,082,532	\$ 5,849,302	\$ 5,616,071	\$ 5,383,841
Scuba diving	\$ 3,852,510	\$ 3,722,232	\$ 3,596,360	\$ 3,474,743	\$ 3,357,240	\$ 3,243,710	\$ 3,134,020	\$ 3,028,038	\$ 2,925,641	\$ 2,826,706	\$ 2,731,117	\$ 2,638,760	\$ 2,549,527	\$ 2,463,311	\$ 2,380,011	\$ 2,299,527	\$ 2,221,765	\$ 2,146,633	\$ 2,074,042	\$ 2,003,905	\$ 1,936,140	\$ 1,870,667	\$ 1,803,437	\$ 1,736,214	\$ 1,670,981	
Snorkeling	\$ 28,718,712	\$ 27,747,548	\$ 26,809,225	\$ 25,902,633	\$ 25,026,699	\$ 23,362,691	\$ 22,572,648	\$ 21,809,322	\$ 21,071,809	\$ 20,359,231	\$ 19,670,759	\$ 19,005,564	\$ 18,362,864	\$ 17,741,888	\$ 17,141,930	\$ 16,562,251	\$ 16,002,175	\$ 15,461,039	\$ 14,838,202	\$ 14,433,045	\$ 13,944,971	\$ 13				

S3. Monetary flow account

S3.4 Local cultural services

The aggregate estimates produced from this worksheet should feed into the monetary account, the balance sheet, the asset value summary.

Baseline (2018)		
	Annual Value	PV 25
Total value of ANT Heritage tour attendees	\$ 9,887	\$ 168,657
Total value of ANT Dates with Nature tour attendees	\$ 79,380	\$ 1,354,093
Total ANT Tours	\$ 89,267	\$ 1,522,750
Value of cultural services for local populaton	\$ 2,829,247	\$ 50,136,141

Data							
ID	Description	Source	Value	Units	Year	Notes	
3.4a	ANT Heritage Tour - Price Adult	Anguilla National Trust (http://www.anaxanatio)	50	US \$	2018		
3.4b	ANT Heritage Tour - Price Child	Anguilla National Trust (http://www.anaxanatio)	20	US \$	2018		
3.4c	ANT Heritage Tour - Number of Adult Attendees	Assumption	50%	Proportion	2018		
3.4d	ANT Heritage Tour - Number of Child Attendees	Assumption	50%	Proportion	2018		
3.4e	ANT Heritage Site Tour - Factor of ecosystem dependant	Assumption	38%	Proportion	2018		
3.4f	ANT Dates with Nature - Price	Anguilla National Trust (http://www.anaxanatio)	50	US\$	2018		
3.4g	ANT Dates with Nature - Factor of Ecosystem Depender	Assumption	100%	Proportion	2018		
3.4h	Conversion factor - US \$ to EC \$	Google	2.70	Exchange rate	Average 2018 rate	At time of calculating	
3.4i	WTP for cultural services (generalised)	Multiple studies as referenced in "Recreati	250.53	US \$	2003	Average value for cultural/passive values - meta-analysis of estuarine and coastal ecosystems	
3.4j	GDP Deflator	See US \$ GDP Deflator tab	2003	2018	Inflator	Taken from the US \$ GDP Deflator tab, and rebased to 2003=100	
			100.00	135.59	1.36		
3.4k	WTP for cultural services (generalised)	Calculation	339.68	US \$	2018		
3.4l	WTP for cultural services (generalised)	Calculation	917.14	ECD	2018		
3.4m	Anguilla PPP per capita	IndexMundi 2019a (https://www.indexmu)	12,200	US \$	2008		
3.4n	USA PPP per capita	IndexMundi 2019b (https://www.indexmu)	59,500	US \$	2017		
	Price for membership of the Anguilla cycle association / price to participate in or spectate at cycle races etc.					For future iterations of the account, if data becomes available or if it is possible to conduct surveys	
	Price of membership of the Anguilla Sailing Association / price to participate in or spectate at sailing races etc.					For future iterations of the account, if data becomes available or if it is possible to conduct surveys	
	Price of membership of cricket clubs etc.					For future iterations of the account, if data becomes available or if it is possible to conduct surveys	

Assumptions			
ID	Description	Source	Explanation
3.4o	ANT Heritage tour factor of ecosystem dependence	Assumption	Based on 8 sites, 3 of which can be classified entirely as natural capital assets
3.4p	ANT Dates with Nature factor of ecosystem dependence	Assumption	On the basis that all sites visited can be classified entirely as natural capital assets
3.4q	Proportion of children and adults attending ANT Heritage tour	n/a	Due to lack of data to indicate otherwise, assume an equal split between adults and children attending the ANT Heritage Tour
3.4r	Value of cultural serices		The value applied is a catch-all WTP for cultural services transferred from a meta-analysis, as such it is not specific to Anguilla and is used as a proxy value for this service

Steps			
Step	Description	Data/Assumptions us	Explanation
For ANT tour calculations			
3.4.1	Calculate values for each tour	3.4a-3.4h	Apply price for each tour to respective attendees for each tour
3.4.2	Apply factor of ecosystem dependence	3.4a-3.4e	Where applicable, multiply number of attendees by NC contribution to respective tour
3.4.3	Apply exchange rate into ECD	3.4a-3.4h	Multiply values by appropriate exchange rate
3.4.4	Discount	Discount factor	Apply appropriate discount rate
For WTP for local cultural services calculations			
3.4.5	Inflate	3.4i, 3.4j, 3.4k	For each variable with data sources not in 2018 EC \$ (3.4i), use appropriate deflator (3.4j) to convert original prices.
3.4.6	Convert to ECD	3.4k, 3.4h, 3.4l	
3.4.7	Calculate total WTP	3.4i, 3.4m, 3.4n, 2.4.2	Apply WTP transfer value, adjusted by the relative PPP between USA and Anguilla, to the total population of Anguilla
3.4.8	Discount	Discount factor	Apply appropriate discount rate

Calculations - Annual value																									
Year (chron)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042
Year (project)	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Discount Rate	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Discount Factor	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.79	0.76	0.73	0.71	0.68	0.66	0.64	0.62	0.60	0.58	0.56	0.54	0.52	0.50	0.49	0.47	0.45	0.44
Time Horizon	25																								
ANT Heritage Tour - Adult Attendees	\$ 7,062	\$ 6,823	\$ 6,593	\$ 6,370	\$ 6,154	\$ 5,946	\$ 5,745	\$ 5,551	\$ 5,363	\$ 5,182	\$ 5,007	\$ 4,837	\$ 4,674	\$ 4,516	\$ 4,363	\$ 4,215	\$ 4,073	\$ 3,935	\$ 3,802	\$ 3,673	\$ 3,549	\$ 3,429	\$ 3,313	\$ 3,201	\$ 3,093
ANT Heritage Tour - Child Attendees	\$ 2,825	\$ 2,729	\$ 2,637	\$ 2,548	\$ 2,462	\$ 2,378	\$ 2,298	\$ 2,220	\$ 2,145	\$ 2,073	\$ 2,003	\$ 1,935	\$ 1,869	\$ 1,806	\$ 1,745	\$ 1,686	\$ 1,629	\$ 1,574	\$ 1,521	\$ 1,469	\$ 1,420	\$ 1,372	\$ 1,325	\$ 1,280	\$ 1,237
ANT Dates with Nature Tour Attendees	\$ 79,380	\$ 76,696	\$ 74,102	\$ 71,596	\$ 69,175	\$ 66,836	\$ 64,576	\$ 62,392	\$ 60,282	\$ 58,244	\$ 56,274	\$ 54,371	\$ 52,532	\$ 50,756	\$ 49,040	\$ 47,381	\$ 45,779	\$ 44,231	\$ 42,735	\$ 41,290	\$ 39,894	\$ 38,545	\$ 37,241	\$ 35,982	\$ 34,765
Value of cultural services for local pop	\$ 2,829,247	\$ 2,747,986	\$ 2,668,986	\$ 2,592,186	\$ 2,516,360	\$ 2,442,697	\$ 2,371,139	\$ 2,301,627	\$ 2,234,105	\$ 2,164,710	\$ 2,097,453	\$ 2,032,269	\$ 1,969,096	\$ 1,907,871	\$ 1,845,909	\$ 1,785,956	\$ 1,727,948	\$ 1,671,820	\$ 1,617,512	\$ 1,562,481	\$ 1,509,322	\$ 1,457,972	\$ 1,408,369	\$ 1,360,453	\$ 1,312,668

Calculations - 25 year PV	
ANT Heritage tour	\$ 168,657
ANT Dates with Nature	\$ 1,354,093
Value of cultural services for local pop	\$ 50,136,141

S3. Monetary flow account

S3.5 Heritage Salt Ponds

The aggregate estimates produced from this worksheet should feed into the monetary account, the balance sheet, the asset value summary.

Baseline (2018)		
	Annual Value	PV 25
		EC \$
Total	\$ -	\$ -

Data

ID	Description	Source	Value	Units	Year	Notes
3.5a						
3.5b						
3.5c						
3.5d						
3.5e						
3.5f						
3.5g						
3.5h						

Assumptions

ID	Description	Source	Explanation
3.5i			
3.5j			

Steps

Step	Description	Data/Assump	Explanation
3.5.1			
3.5.2			
3.5.3			
3.5.4	Discount	Discount facto	Apply appropriate discount rate

Calculations - Annual value

Calculations - 25 year PV	
	0.00
	0.00
	0.00

S3 Monetary flow account

S3.6 Carbon Sequestration

ANSWER *See Figure 1.*

The aggregate estimates produced from this worksheet should feed into the monetary account, the balance sheet, the asset value summary.

		Annual Value	PV 25	
Bare ground	\$	-	\$	-
Beach	\$	-	\$	-
Buildings	\$	-	\$	-
Cultivated land	\$	-	\$	-
Developed Land	\$	-	\$	-
Disturbed area	\$	-	\$	-
Dry forest	\$	4,047	\$	4,964
Ironshore	\$	-	\$	-
Mangrove	\$	84,404	\$	1,997,833 EC \$
Open Water	\$	-	\$	-
Recreation	\$	-	\$	-
Road	\$	-	\$	-
Scrub	\$	-	\$	-
Thicket	\$	-	\$	-
Seagrass	\$	745,474	\$	17,645,378
Unknown	\$	-	\$	-
Total	\$	833,924	\$	19,648,176

Data

ID	Description	Source	Value	Units	Year	Notes
3.6a	Central non-traded value of carbon	Department for Business, Energy, and Industrial Strategy	See Carbon Prices tab	£	2018	The central non-traded value of carbon is applied, as the EU Emissions Trading Scheme does not cover the UK.
3.6b	GBP to ECD exchange rate	HM Revenue and Customs, 2019	3.63	Exchange rate	Average 2018 rate	
3.6c	US \$ to EC \$ exchange rate	https://www.xe.com/	2.7	Exchange rate	Average 2018 rate	
3.6d	Anguilla GDP per capita	UN data, 2019 - Per capita GDP at current prices - US dollars. Available from the UN Statistics Division, Office for National Statistics, 2019. Gross domestic product per head; Table p. Available	\$ 18,861	\$ 50,925	2017 US \$	2017 EC \$
3.6e	UK GDP per capita		2015 GBP (base year)	2017 GDP	2017 EC \$	
			£ 29,670	£ 30,948	£ 112,342	
3.6f	UK GDP deflator	See UK GDP Deflator tab	2015	2017	Deflator	Rebased to 2015=100
			100	104.31	1.04	
3.6g	UK : Anguilla ratio	Calculation	2.21			

Assumptions

ID	Description	Source	Explanation
	No carbon sequestered from other habitats		It is implicitly assumed that no carbon is sequestered, and can therefore be valued, by other habitats

Steps

Step	Description	Data/Assumptions used	Explanation
3.6.1	Convert carbon prices	3.6a, 3.6b	Use exchange rate (3.6b) to convert carbon prices (3.6a) from GBP (£) to EC \$
3.6.2	Deflate carbon prices	3.6 g	Apply deflator to price of carbon based on GDP/capita between UK and Anguilla
3.6.3	Calculation value of carbon sequestered	3.6.1, 2.7.3	Apply appropriate carbon value (3.6.1) to tCO2e (2.7.3)
3.6.4	Discount	Discount factor	Apply appropriate discount rate

Calculations - Annual value

Calculations - 25 year PV

Bare ground	\$	-
Beach	\$	-
Buildings	\$	-
Cultivated land	\$	-
Developed Land	\$	-
Disturbed area	\$	-
Dry forest	\$	4,964
Ironshore	\$	-
Mangrove	\$	1,997,833
Open Water	\$	-
Recreation	\$	-
Road	\$	-
Scrub	\$	-
Thicket	\$	-
Seagrass	\$	17,645,378
Unknown	\$	-

S3 Monetary flow account

S3.7 Coastal hazard defence

ANSWER

The aggregate estimates produced from this worksheet should feed into the monetary account (S3), the summary and account overview.

Baseline (2017/2018)			
		Annual Value	PV 25
Hotel closures - revenue lost due to water damage			
With natural capital	Hotel revenue lost in a year due to closure	\$ 1,985,935	\$ 33,842,686
	Accommodation tax revenue lost	\$ 198,393	\$ 3,384,269
Without natural capital	Hotel revenue lost in a year due to closure	\$ 2,539,496	\$ 43,318,637
	Accommodation tax revenue lost	\$ 200,000	\$ 3,384,269
Avoided revenue loss	Hotel revenue lost in a year due to closure	\$ 556,502	\$ 9,475,953
	Accommodation tax revenue lost	\$ 55,500	\$ 947,595
Infrastucture damage			
With natural capital	Low	\$ 17,948.41	\$ 30,617,059
	Medium	\$ 23,077.81	\$ 393,666,450
	High	\$ 93,407.84	\$ 168,322,000
Without natural capital	Low	\$ 14,673.00	\$ 25,038,840
	Medium	\$ 29,217.15	\$ 498,396,967
	High	\$ 133,000.00	\$ 237,485,700
Avoided damage	Low	\$ 37,007	\$ 6,576,196
	Medium	\$ 61,293,000	\$ 104,730,516
	High	\$ 399,577	\$ 61,123,909

Assumption

ID	Description	Source	Explanation
3.7i	Water damage proportions	Data-based research and engagement with Anguillian insurers	Focusing data-based research and engagement with Anguillian insurers, it was clear that the main cause of damage was from wind during Hurricane Irma. It is difficult to estimate the proportion of damages and revenue impacts that are primarily from water damage as insurance claims and pay-outs are reported as lump sum (i.e. total damage regardless of source). It is clear from the research conducted that beach and coastal properties suffered the most damage. No clear proportions have been found, but based on insurer's research to date and engagement with insurers as well as the assistance from Anguilla's Department of Environment, it is reasonable to assume that on-shore areas are more likely to be damaged. It is assumed that 20% of damages sustained to a onshore property as a result of water damage, whilst 5% of damages sustained to an off-shore property as a result of water damage. These proportions can be adjusted in the future to reflect better information data.
3.7j	10%		The underlying GIS model has modelled a low probability event, similar to the scale of Hurricane Irma and Maria (i.e. Category 4 or 5 at point of contact with Anguilla). How often storms of this scale will occur in the future is still not known, so a conservative assumption of once every 10 years has been made. This can be adjusted in to the future to reflect better modelling and information, along with taking into consideration the impacts of climate change. This can be adjusted in the future to reflect better information data.
3.7k	20%	Virdian GIS analysis	Assumption on natural capital protection estimated as the total damage costs in the degraded scenario, divided by the total damage costs in the baseline (with natural capital) scenario. Indicates how much worse damage would be without any natural capital. This can be adjusted in the future to reflect better information data.
3.7l	Repair and rebuild costs		Discussions with insurers on the island revealed that in general the cost to Anguillan residents to rebuild and repair ranged between US\$90 and US\$200. Contractors were contacted as prices depend not only on the style of rebuild but also the construction materials used.
3.7m	2.7		Conversion rate between US\$ and ECS.
3.7n	Definition of jobs in travel and tourism	World Travel & Tourism Council (2019) https://www.wttc.org/economic-impact/2019/anguilla . Available at: https://www.wttc.org/economic-impact/country-analysis/country-reviews/ (p.4)	Travel and tourism jobs includes "employment by hotels, travel agents, airlines and other passenger transportation services (excl. commercial services). It also includes, for example, the activities of the restaurant and leisure industries directly supported by tourism."
3.7o	UK tourism industry as a proxy for Anguilla		

Steps

Step	Description	Data/Assumptions used	Explanation
Hotel closures			
3.7.1	Estimate the hotel revenue lost per day	2.7b & 3.7a	For each hotel, multiply the number of rooms (2.9b) by the revenue per available room (3.7a) to produce the estimate loss in hotel revenue lost per day. Calculations shown below.
3.7.2	Estimate the hotel revenue lost in a year due to closure	2.7d	For each hotel, multiply the estimated hotel revenue lost per room per day (Step 3.7.1) by the number of days a hotel has been closed in the year following the landfall of Hurricane Irma (2.9d) to produce the total hotel revenue lost in a year due to closure. Calculations shown below.
3.7.3	Estimate the accommodation tax revenue loss	3.7b	For each hotel, multiply the hotel revenue lost in year due to closure (Step 3.7.2) by Anguilla's accommodation tax rate (3.7c) to produce the loss in accommodation tax revenue that accrues to the government. Calculations shown below.
3.7.4	Estimating revenue loss due to water damage	2.7a, 3.7c and 3.7d	Based on whether a hotel is on-shore or near-shore (2.9a) assign the appropriate water damage proportion (3.7d) that represents the extent of water damage sustained for a hotel. To estimate the proportion of total loss revenue that is attributable to water damage, multiply each element that was calculated in the preceding steps (3.7.1, 3.7.2 and 3.7.3) by the water damage proportion for that hotel (3.7d). Calculations shown below.
3.7.5	Estimate total revenue loss for each component	3.7.1, 3.7.2, 3.7.3	For each calculated component, sum across the hotels to produce an annual value for each component. Calculations shown below.
3.7.6	Estimate total revenue lost due to water damage, for each component	3.7.4	For each calculated component, sum across the hotels to produce an annual value for each component. Calculations shown below.
3.7.7	Estimate annual values with Natural Capital	3.7.5 & 3.7.6 and 3.7.g	For both total revenue loss and revenue loss due to water damage, estimate annual values of hotel revenue lost in year and accommodation tax revenue lost by dividing sums calculated as part of Step 3.7.5 and 3.7.6 by the assumed storm frequency (3.7f). Calculations shown below.
3.7.8	Estimate annual values without Natural Capital	3.7.5, 3.7.6, 3.7g and 3.7.h	To estimate the annual damages if there was no Natural Capital on Anguilla, repeat Step 3.7.7 and multiply the quotient by the assumed proportion of protection that is attributable to natural capital (3.7k). Calculations shown below.
3.7.9	Estimate the avoided hotel closures	3.7.7 and 3.7.8	Subtract the estimated annual values with Natural Capital (3.7.7) from the estimated annual values without Natural Capital (3.7.8). Calculations shown below.
3.7.10	Calculate the present value over 25 years	3.7.7, 3.7.8 and 3.7.9	Take the baseline forecasts of expected revenue loss due to water damage for each component and scenario (3.7.7, 3.7.8 and 3.7.9), then calculate the present value over 25 years. Calculations shown below.
3.7.11	Estimate avoided loss in employment	3.7.7 and 3.7.e	Multiply the direct employment contribution in Tourism and Travel on Anguilla (3.7b) by the assumed proportion of protection that is attributable to natural capital (3.7k), the product is the avoided loss of direct employment in tourism and travel on Anguilla in 2018 (3.7h). Employment includes both part-time and full-time employees.
3.7.12	Estimate the ratio between employment and FTE in the UK tourism industry	3.7g	Divide the number of employees that are directly employed in the tourism industry by the number of direct FTEs that are supported by the tourism industry (3.7g). The quotient is the ratio, it explains how many employees (part-time and full-time) are equal to 1 full-time equivalent.
3.7.13	Estimate avoided loss in full-time equivalent	3.7g, 3.7h and 3.7o	Multiply the avoided loss of direct employment in tourism and travel on Anguilla (3.7h) by the employment to FTE ratio (3.7g), the product is the avoided loss of FTEs in tourism and travel on Anguilla in 2018.
Building damage			
3.7.14	Convert damage cost per square foot from US\$ to ECR	3.7e and 3.7j	Multiply the damage cost per square foot by the conversion factor (3.7j).
3.7.15	Estimate total damage cost, with and without natural capital	2.7g (Tab 52.7) and 3.7e	Multiply the damage cost per square foot (ECR) by the total square foot affected in each storm surge zone for both with and without natural capital (Tab 2.7). Calculations shown below.
3.7.16	Estimate the total avoided building damage cost	Step 3.7.12	Subtract the estimated damage cost with natural capital from the total estimated damage cost without natural capital. Calculations shown below.
3.7.17	Estimate annual values	3.7.12 and 3.7.13	To estimate annual damage costs with and without natural capital and the annual avoided expected damage costs, divide them by the assumed storm frequency (3.7g). Calculations shown below.
3.7.18	Calculate the present value over 25 years		Take the baseline forecasts of the annual damage costs, then calculate the present value over 25 years. Calculations shown below.

Calculations

Financial Summary - Annual Value									
Hotel closures		Total revenue loss				Revenue loss due to water damage			
Hotel ID		Hotel revenue lost per day		Accommodation tax revenue lost		Hotel revenue lost per day		Accommodation tax revenue lost	
Hotel ID	Location	Hotel revenue lost per day	Accommodation tax revenue lost	Hotel revenue lost per day	Accommodation tax revenue lost	Hotel revenue lost per day	Accommodation tax revenue lost	Hotel revenue lost per day	Accommodation tax revenue lost
3	S	6,217.61	\$ 2,209,429	\$ 226,942.91	\$ 1,243.52	\$ 403,889.82	\$ 45,388.58	\$ 2,209,429	\$ 226,942.91
9	S	5,877.87	\$ 2,104,934	\$ 213,171.33	\$ 1,170.52	\$ 377,166.82	\$ 42,718.58	\$ 2,104,934	\$ 213,171.33
14	S	5,877.87	\$ 2,104,934	\$ 213,171.33	\$ 1,170.52	\$ 377,166.82	\$ 42,718.58	\$ 2,104,934	\$ 213,171.33
28	S	3,201.08	\$ 601,560	\$ 40,156.47	\$ 658.34	\$ 80,316.04	\$ 8,031.66	\$ 601,560	\$ 40,156.47
33	S	8,412.07	\$ 307,404	\$ 307,040.41	\$ 1,682.41	\$ 614,080.62	\$ 61,400.08	\$ 307,404	\$ 307,040.41
35	S	146,296.80	\$ 51,904,337	\$ 3,393,830.20	\$ 29,259.36	\$ 10,675,666.40	\$ 1,067,666.44	\$ 51,904,337	\$ 3,393,830.20
36	S	10,842.72	\$ 3,936,988	\$ 262,099.16	\$ 1,410.52	\$ 4,000,000.00	\$ 400,000.00	\$ 3,936,988	\$ 262,099.16
39	S	30,842.72	\$ 10,027,561	\$ 1,308,250.13	\$ 7,168.54	\$ 2,616,518.27	\$ 261,651.83	\$ 10,027,561	\$ 1,308,250.13
41	S	10,606.02	\$ 318,156	\$ 31,816.56	\$ 530.33	\$ 15,909.78	\$ 1,590.98	\$ 318,156	\$ 31,816.56
42	S	29,295.36	\$ 1,072,904	\$ 120,295.43	\$ 6,151.87	\$ 1,240,906.86	\$ 124,090.93	\$ 1,072,904	\$ 120,295.43
43	S	10,249.78	\$ 3,727,983	\$ 327,798.32	\$ 2,048.16	\$ 747,076.85	\$ 74,707.66	\$ 3,727,983	\$ 327,798.32
44	S	10,249.78	\$ 3,727,983	\$ 327,798.32	\$ 2,048.16	\$ 747,076.85	\$ 74,707.66	\$ 3,727,983	\$ 327,798.32

2

Annual values - Hotel closure	With Natural Capital	Without Natural Capital	Avoided
Total annual revenue loss	\$ 11,185,048.70	\$ 14,316,862.33	\$ 3,131,813.63
Hotel revenue lost in accident to children	\$ 1,118,504.87	\$ 1,431,686.23	\$ 313,181.36
Accident prevention tax revenue lost	\$ 1,118,504.87	\$ 1,431,686.23	\$ 313,181.36
Annual revenue loss in water	\$ 1,083,934.56	\$ 2,339,436.24	\$ 556,501.68

Annual values - Building damage	With Natural Capital	Without Natural Capital	Avoided
Low	\$ 1,794,841.49	\$ 1,467,834.49	\$ 327,006.53
Medium	\$ 23,077,615.61	\$ 23,217,154.79	\$ 6,139,530.68
High	\$ 9,928,204.02	\$ 13,921,781.31	\$ 3,993,577.29

due to water
damage

Calculations - Discounting												
Year (chron)	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
Year (project)	0	1	2	3	4	5	6	7	8	9	10	11
Discount rate	3.60%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%	3.50%
Growth Factor	1.00	0.97	0.93	0.90	0.87	0.84	0.81	0.78	0.75	0.72	0.71	0.69
Time horizon	25											
Hotel closures												
With current state of Natural Capital												
Hotel revenue lost in a year due to closure	\$ 1,083,934.56	\$ 1,016,844.99	\$ 1,852,024.14	\$ 1,789,395.31	\$ 1,728,884.35	\$ 1,670,419.67	\$ 1,613,032.04	\$ 1,559,354.63	\$ 1,506,622.83	\$ 1,455,674.24	\$ 1,406,446.54	\$ 1,358,887.47
Accommodation tax revenue lost	\$ 198,393.46	\$ 191,684.53	\$ 185,202.41	\$ 178,393.53	\$ 172,888.44	\$ 167,041.97	\$ 161,393.20	\$ 155,936.46	\$ 150,662.28	\$ 145,567.42	\$ 140,646.85	\$ 135,865.75
Without Natural Capital												
Hotel revenue lost in a year due to closure	\$ 2,539,436.24	\$ 2,453,661.58	\$ 2,370,590.90	\$ 2,290,425.99	\$ 2,212,971.97	\$ 2,138,137.17	\$ 2,065,833.02	\$ 1,995,073.93	\$ 1,928,477.23	\$ 1,863,263.02	\$ 1,800,254.13	\$ 1,739,375.97
Accommodation tax revenue lost	\$ 253,943.62	\$ 245,396.17	\$ 237,059.09	\$ 229,042.60	\$ 221,297.20	\$ 213,813.72	\$ 206,593.00	\$ 199,367.97	\$ 192,847.22	\$ 186,336.20	\$ 180,254.91	\$ 173,960.71
Avoided												
Hotel revenue lost in a year due to closure	\$ 555,501.68	\$ 536,176.60	\$ 518,566.78	\$ 501,030.69	\$ 484,087.62	\$ 467,711.71	\$ 451,900.97	\$ 436,619.93	\$ 421,854.30	\$ 407,588.79	\$ 391,805.99	\$ 380,484.40
Accommodation tax revenue lost	\$ 55,550.17	\$ 53,671.65	\$ 51,856.68	\$ 50,103.07	\$ 48,408.76	\$ 46,771.75	\$ 45,190.10	\$ 43,661.93	\$ 42,185.44	\$ 40,708.85	\$ 39,380.56	\$ 38,048.40
Building damage												
With Natural Capital												
Low	\$ 1,794,841.02	\$ 1,734,145.82	\$ 1,675,053.03	\$ 1,618,843.77	\$ 1,564,100.26	\$ 1,511,207.88	\$ 1,460,104.33	\$ 1,410,720.82	\$ 1,363,023.01	\$ 1,310,936.45	\$ 1,272,396.57	\$ 1,234,936.67
Medium	\$ 23,077,615.61	\$ 22,977,213.15	\$ 21,543,201.11	\$ 20,814,687.06	\$ 20,110,806.76	\$ 19,430,731.17	\$ 18,189,707.17	\$ 17,065,456.17	\$ 16,032,761.34	\$ 15,083,155.88	\$ 14,160,353.18	\$ 13,294,077.73
High	\$ 9,208,204.02	\$ 9,052,477.65	\$ 8,268,051.20	\$ 8,954,871.20	\$ 8,651,856.23	\$ 8,359,281.33	\$ 8,076,080.67	\$ 7,836,821.77	\$ 7,639,630.79	\$ 7,439,290.62	\$ 6,880,353.73	\$ 6,703,230.73
Without Natural Capital												
Low	\$ 1,467,834.90	\$ 1,418,107.57	\$ 1,370,230.20	\$ 1,323,902.61	\$ 1,275,132.96	\$ 1,235,877.25	\$ 1,194,094.30	\$ 1,155,704.64	\$ 1,114,690.47	\$ 1,076,995.63	\$ 1,045,575.48	\$ 1,005,386.94
Medium	\$ 29,217,154.79	\$ 28,229,136.50	\$ 27,274,502.63	\$ 26,352,199.64	\$ 25,461,062.64	\$ 24,600,060.34	\$ 23,768,174.74	\$ 22,946,419.66	\$ 22,187,844.99	\$ 21,437,501.39	\$ 20,719,210.99	\$ 20,014,214.95
High	\$ 13,021,781.31	\$ 13,450,996.43	\$ 12,996,131.92	\$ 12,556,649.10	\$ 12,132,028.12	\$ 11,721,766.30	\$ 11,325,078.27	\$ 10,964,309.27	\$ 10,627,302.27	\$ 10,302,361.81	\$ 9,984,142.41	\$ 9,659,419.69
Avoided												
Low	\$ 327,006.53	\$ 315,948.34	\$ 305,264.10	\$ 294,941.65	\$ 284,963.70	\$ 275,330.73	\$ 267,014.88	\$ 258,324.52	\$ 250,934.08	\$ 243,812.08	\$ 235,999.73	\$ 228,105.44
Medium	\$ 6,139,139.16	\$ 6,031,921.91	\$ 6,731,325.20	\$ 6,537,512.68	\$ 6,350,253.70	\$ 5,917,322.25	\$ 5,494,919.08	\$ 4,852,627.30	\$ 4,662,437.00	\$ 4,904,770.05	\$ 4,354,932.83	\$ 4,265,205.15

1

Calculations - 25 year PV		
Hotel closures		
With Natural Capital	Hotel revenue lost in 1 year due to closure Accommodation tax revenue lost	\$ 33,842,685.00 \$ 3,384,209.51 \$ 4,331,063.00
Without Natural capital	Hotel revenue lost in 1 year due to closure Accommodation tax revenue lost	\$ 43,318,636.88 \$ 4,331,063.00
Avoided	Hotel revenue lost in 1 year due to closure Accommodation tax revenue lost	\$ 9,475,951.87 \$ 947,095.18
Building damage	Low Medium High	\$ 30,617,057.96 \$ 393,666,450.44 \$ 787,332,911.87
Without Natural capital	Low Medium High	\$ 25,038,860.30 \$ 408,396,966.60 \$ 237,482,863.27

S3 Monetary flow account
S3.8 Terrestrial Hazard Defence

The aggregate estimates produced from this worksheet should feed into the monetary account (S3), the summary and account overview.

Baseline (2018)			
	Annual Value	PV 25	EC\$
Total	\$ -	\$ -	

Data

ID	Description	Source	Value	Units	Year	Notes
3.10a						
3.10b						
3.10c						
3.10d						
3.10e						
3.10f						
3.10g						
3.10h						

Assumptions

ID	Description	Source	Explanation

Steps

Step	Description	Data/Assumption	Explanation

Calculations - 25 year PV

Input Calculations

Carbon Retention

The aggregate estimate of avoided carbon loss from this worksheet provides the basis for the estimation of monetary value in S3.8.

Baseline (2018)		Annual
Agriculture		37,620
Bare		23,415
Beach		13,969
Drought deciduous forest		333
Mangrove		28,499
Salt pond		38,196
Scrub		1,145,326
Thicket		174,989
Urban		36,261
Gross carbon storage		1,498,609

Data

ID	Description	Source	Value					Unit	Note
2.8a	Mapping of BVI habitat scores onto carbon storage values (taken from SAERI - South Atlantic Environmental Research Institute)	Adapted from BVI carbon storage valuation, and carbon storage values: SAERI - South Atlantic Environmental Research Institute	SAERI Carbon Storage Values	BVI Habitat Scores					These carbon storage values are lifted from St Helena in the South Atlantic. The habitat and ecosystems are not comparable, and as such we intend these calculations to be indicative only. As the science and research improves, we hope the storage values
			< 20 Mg C Ha ⁻¹	1-3					
			20 - 35 Mg C Ha ⁻¹	4-6					
			35 - 50 Mg C Ha ⁻¹	7-9					
			50 - 65 Mg C Ha ⁻¹	10-12					
			> 65 Mg C Ha ⁻¹	13-15					
2.8b	Carbon absolute: soil organic stocks (to 15 cm depth)	Adapted from BVI carbon storage valuation, and carbon storage values: SAERI	BVI Habitat Equivalent	Anguilla Habitat	Ranking	Area (ha)	Carbon storage equivalent	Mg C Ha ⁻¹	1Mg = 1 tonne
			Agriculture	Cultivated Land	7	293	35		
			Bare	Bare ground	1	319	20		
			Beach	Beach classification	5	152	25		
			Drought deciduous forest	Dry forest	9	2	50		
			Mangrove	Mangrove	14	119	65		
			Salt Pond	Ponds classification	6	297	35		
			Scrub	Scrub	12	4,801	65		
			Thicket	Thicket	11	795	60		
						192	20		
						44	20		
						258	20		
						Total Urban	494	20	
2.8c	m ² to ha conversion factor	Google	0.0001						
2.8d	tC to tCO ₂ e conversion factor	Department for Business, Energy & Industrial Strategy	3.67						

Assumptions

ID	Description	Explanation
2.8g	Use of SAERI values for carbon storage	Due to a gap in the academic literature, the SAERI carbon storage values are assumed and used as a proxy for Anguilla habitats. Please note use of these placeholder carbon storage values are intended only to demonstrate the possible method, and not to inform results.
2.8h	Use of BVI habitat rankings	It is assumed that the carbon storage ranking of BVI habitats are applicable to Anguilla, due to (assumed) similar habitat characteristics
2.8i	Carbon storage in soils	It is assumed that carbon storage in soils is the same as carbon storage in biomass
2.8j	Carbon depletion	It is assumed that the carbon depletion rates are appropriate for Anguilla habitat

Stens

Step	Description	Data/Assumptions used	Explanation
2.8.1	Rank habitat type	2.8a	Used the BVI method to rank the Anguilla habitats. The habitat types were not exact matches.
2.8.2	Identify carbon storage values	2.8a	The carbon storage values were identified based habitat area, according to the SAERI storage values
2.8.3	Convert habitat area from sqm to ha	2.8a, 2.8b	Habitat areas in extent are provided in m ² , therefore must be converted to ha (2.8.3) to suit the carbon storage values
2.8.4	Apply carbon storage values	2.8.2, 2.8.3	Apply to appropriate storage values (2.8.2) to the area of each habitat type (2.8.3)
2.8.5	Convert tC to tCO ₂ e	2.8.4, 2.8c	Carbon values were converted from tC to tCO ₂ e
2.8.6	Calculate average depletion rate	2.8d	Based on several values found in literature, calculate the average carbon depletion rate for changes in land use
2.8.7	Apply depletion rate	2.8.6, 2.8a	Apply carbon depletion rate (2.8.6) to appropriate habitat type (2.8a) to calculate the avoided carbon loss for maintaining current land use (2.8.7)

Calculations - Annual

Calculations - Annual

Carbon prices and sensitivities 2010-2100 for appraisal, 2018 £/tCO₂e

	Central prices (2018/£)		Central prices (2018/£)	(2017/£)	
2017	66.24	65.11	2059	300.22	295.08
2018	67.24	66.09	2060	307.20	301.95
2019	68.24	67.08	2061	312.74	307.39
2020	69.27	68.08	2062	318.25	312.81
2021	70.42	69.22	2063	323.20	317.67
2022	71.58	70.35	2064	327.89	322.28
2023	72.73	71.49	2065	332.01	326.33
2024	73.89	72.62	2066	336.07	330.32
2025	75.04	73.76	2067	339.46	333.65
2026	76.20	74.89	2068	342.56	336.70
2027	77.35	76.03	2069	345.20	339.29
2028	78.50	77.16	2070	347.47	341.52
2029	79.66	78.30	2071	349.72	343.74
2030	80.81	79.43	2072	351.59	345.57
2031	88.32	86.81	2073	353.17	347.13
2032	95.82	94.18	2074	354.13	348.07
2033	103.33	101.56	2075	355.13	349.05
2034	110.83	108.93	2076	355.21	349.13
2035	118.33	116.31	2077	355.34	349.26
2036	125.84	123.68	2078	354.90	348.82
2037	133.34	131.06	2079	354.24	348.18
2038	140.85	138.44	2080	352.95	346.91
2039	148.35	145.81	2081	352.77	346.73
2040	155.85	153.19	2082	351.97	345.95
2041	163.36	160.56	2083	350.90	344.90
2042	170.86	167.94	2084	349.62	343.63
2043	178.37	175.31	2085	348.48	342.52
2044	185.87	182.69	2086	346.67	340.74
2045	193.37	190.07	2087	344.59	338.69
2046	200.88	197.44	2088	342.45	336.59
2047	208.38	204.82	2089	339.98	334.17
2048	215.89	212.19	2090	337.50	331.72
2049	223.39	219.57	2091	335.39	329.65
2050	230.89	226.94	2092	333.23	327.53
2051	239.06	234.97	2093	330.53	324.88
2052	246.97	242.74	2094	327.77	322.16
2053	254.92	250.56	2095	324.88	319.33
2054	262.87	258.37	2096	321.93	316.42
2055	270.57	265.94	2097	319.09	313.63
2056	278.31	273.55	2098	315.75	310.35
2057	285.77	280.88	2099	312.72	307.37
2058	293.06	288.04	2100	309.37	304.07

East Caribbean Central Bank Deflators
Source: <https://www.eccb-centralbank.org/p/consumer-price-index>
Taken from CPI Quarterly - September 2018

Anguilla Consumer Price Index

March 2010 = 100

www.english-test.net

		100	102.294	103.902	104.111	105.379	106.761	106.446	107.144	106.095	106.393	106.382	106.95	106.17	107.199	106.469	106.908	105.995	106.21	105.835	105.564	105.68	104.394	103.226	104.934	104.923	106.185	105.848	105.62	107.615	106.92	106.444	106.444																		
	Weights	Mar-10	Jun-10	Sep-10	Dec-10	Mar-11	Jun-11	Sep-11	Dec-11	Mar-12	Jun-12	Sep-12	Dec-12	Mar-13	Jun-13	Sep-13	Dec-13	Mar-14	Jun-14	Sep-14	Dec-14	Mar-15	Jun-15	Sep-15	Dec-15	Mar-16	Jun-16	Sep-16	Dec-16	Mar-17	Jun-17	Sep-17	Dec-17	Mar-18	Jun-18	Sep-18															
Inflation Rate (end of period %)		n.a.	0.34	0.38	2.29	1.57	0.20	1.22	1.31	-	0.29	0.66	-	0.98	0.28	-	0.01	0.53	-	0.73	0.97	-	0.68	0.41	-	0.85	0.20	-	0.35	-	0.26	0.11	-	1.22	-	1.12	1.65	-	0.01	1.20	-	0.32	-	0.22	-	1.89	-	0.65	-	0.45	-
Inflation Rate (period average %)		n.a.	0.34	0.38	2.29	1.57	0.20	1.22	1.31	-	0.29	0.66	-	0.98	0.28	-	0.01	0.53	-	0.73	0.97	-	0.68	0.41	-	0.85	0.20	-	0.35	-	0.26	0.11	-	1.22	-	1.12	1.65	-	0.01	1.21	-	0.32	-	0.22	-	1.89	-	0.65	-	0.45	-
All items		100.00	100.00	100.34	100.72	103.03	104.65	104.86	106.14	107.53	107.21	107.91	106.86	107.16	107.15	107.72	106.93	107.97	107.24	107.68	106.76	106.97	106.60	106.32	106.44	105.15	103.97	105.69	105.68	106.95	106.61	106.38	108.39	107.69	107.21	107.21															
Food & Non-Alcoholic Beverages		12.83	100.00	100.38	100.24	102.20	103.69	104.05	109.06	108.03	107.89	109.69	109.73	108.88	109.80	110.21	111.00	112.79	112.47	113.57	111.55	113.82	111.98	112.36	112.47	111.76	111.31	111.29	112.22	112.49	112.69	112.89	113.93	114.02	112.07	112.07															
Alcoholic Beverages, Tobacco & Narcotics		2.34	100.00	99.03	102.04	101.67	109.01	114.75	113.73	113.50	113.05	115.83	113.53	114.12	118.12	118.35	119.23	119.74	119.61	119.28	118.23	120.92	119.23	119.49	119.44	120.60	120.67	120.89	122.38	122.68	122.78	123.83	122.83	122.78	122.78																
Clothing & Footwear		3.25	100.00	100.96	100.96	100.96	102.48	102.56	104.32	105.90	109.98	109.96	111.37	113.43	114.69	114.75	113.73	110.77	112.95	105.77	106.08	106.05	105.02	103.32	103.32	103.94	109.45	106.65	103.95	104.07	104.07	103.15	104.90	106.10	106.10																
Housing, Utilities, Gas & Fuels		25.55	100.00	100.04	98.22	98.22	101.01	101.02	101.29	101.29	101.35	101.47	99.61	99.13	98.96	98.92	98.99	99.11	98.15	98.97	97.74	97.79	97.28	97.42	95.94	96.02	95.79	95.63	95.74	94.85	94.85	95.05	94.71	94.50	94.50																
Household Furnishings, Supplies & Maintenance		4.03	100.00	108.73	107.76	111.08	109.51	107.81	107.76	112.58	112.65	109.78	112.71	111.57	108.85	109.83	115.44	112.90	111.23	109.05	108.77	108.72	108.54	109.09	107.49	108.17	113.14	112.45	112.89	113.76	113.31	113.93	113.93	114.15	112.33	112.33															
Health		2.34	100.00	100.00	100.00	99.79	99.79	99.74	99.74	99.74	99.76	100.39	103.29	106.92	109.47	110.60	110.54	111.08	111.37	108.73	115.75	117.27	117.01	117.14	115.95	115.95	108.05	115.81	115.90	115.90	115.55	115.55	115.23	115.23	115.25	115.25															
Transport		15.96	100.00	99.57	99.49	106.27	110.40	110.40	114.06	122.29	121.21	123.78	114.76	120.03	119.26	123.83	116.12	121.54	117.44	119.58	118.47	116.51	117.09	117.20	117.09	107.74	102.40	102.86	101.69	110.67	106.00	107.15	107.15	114.73	113.25	113.25															
Communication		13.42	100.00	100.00	106.16	106.16	106.16	106.16	106.16	106.16	103.59	103.59	103.59	103.59	103.93	103.93	103.93	103.93	103.93	103.64	102.26	102.84	104.19	100.97	104.27	104.64	104.64	116.77	117.29	115.82	118.56	117.25	117.25	117.40	116.15	116.48	116.48														
Recreation & Culture		3.81	100.00	99.94	102.33	97.55	96.08	96.08	97.23	97.72	98.67	98.74	98.41	98.80	97.02	97.39	95.37	94.91	96.22	96.52	93.87	92.46	93.96	93.82	94.75	93.21	90.72	91.84	94.14	92.92	92.72	94.26	92.39	94.27	94.27																
Education		5.91	100.00	100.00	100.00	120.48	120.48	121.59	121.59	121.59	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84	121.84																	
Hotels & Restaurants		4.04	100.00	100.00	98.22	96.89	97.09	98.30	97.60	97.11	97.71	96.92	98.61	99.35	99.72	99.77	99.69	103.51	104.50	103.59	103.04	104.44	105.21	104.46	103.94	104.93	104.71	103.90	103.79	104.96	104.63	103.75	103.75	109.69	106.81	105.67	105.67														
Miscellaneous		6.52	100.00	100.00	100.10	99.84	99.14	99.84	100.29	100.47	101.83	102.25	101.68	102.30	101.92	100.48	100.50	100.96	101.18	102.41	101.80	101.51	101.80	101.93	101.85	102.04	102.74	102.75	103.52	103.78	103.76	103.67	104.07	104.05	104.05																

Source: Anquilla Statistics Department and ECCB Estimates

14-May-1

For 2014 prices	100	100.202	99.8485	99.5937	99.7024	98.4892	97.3876	98.9988	98.9887	100.18	99.8611	99.6457	99.6457	101.528	100.873	100.423	100.423
For 2016 prices	100	101.203	100.881	100.664	100.664	102.566	101.903	101.449	101.449								

Anquilla = prices 100 101.889 101.231 100.78 100.78

017
s 100 101.889 101.231 100.78 100.78

Anguilla Consumer Price Index

December 2000 = 1

Digitized by srujanika@gmail.com

Source: Anguilla Statistics Department

14-May-14

The old CPI series ended in March 2014

For 2003 prices	100	100.649	100.835	100.835	103.525	105.751	105.844	107.199	107.56	109.276	110.677	113.024	121.763	120.696	121.837	121.141	122.059	124.694	126.141	132.004	133.627	131.28	130.353	129.406	130.241	130.241
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Source: Argentina Statistics Department
14-Mar-14

131.262 131.169 131.076 131.354 134.323 138.219 142.115 142.672 143.043 143.256 144.991 147.959 146.753 150.093 150.557 150.371 149.397 99.8866 99.0336 99.234 98.8836 98.6312 98.7389 97.5374 96.4465 98.0421 98.0322 99.2115 98.8961 98.6827 98.6827 100.547 99.898 99.4527 99.4527

0.99453

GDP DEFATORS AT MARKET PRICES, AND MONEY GDP

Outturn data are as at the First Quarterly Estimate of GDP from ONS - last updated 11 February 2019.

Forecast data are consistent with OBR Spring Statement 2019 EFO data as at 13 March 2019

Financial year	Financial year		Money GDP ^{(3), (4)}		Calendar year			
	GDP deflator at market prices 2017-18 = 100	per cent change on previous year	Cash £ million	Cash £ million Non-Seasonally Adjusted	Calendar year	GDP deflator at market prices 2018 = 100	per cent change on previous year	Money GDP ⁽³⁾
			Non-Seasonally Adjusted	Seasonally Adjusted				Cash £ million Non-Seasonally Adjusted
1955-56	4.262		19,816	19,830	1955	4.146		19,416
1956-57	4.532	6.32	21,412	21,386	1956	4.432	6.89	21,087
1957-58	4.743	4.67	22,771	22,788	1957	4.613	4.07	22,365
1958-59	4.863	2.51	23,621	23,593	1958	4.786	3.75	23,500
1959-60	4.886	0.48	25,132	25,184	1959	4.822	0.77	24,654
1960-61	4.987	2.07	26,922	26,942	1960	4.873	1.05	26,476
1961-62	5.152	3.32	28,346	28,374	1961	5.045	3.53	28,142
1962-63	5.314	3.14	29,682	29,699	1962	5.223	3.53	29,460
1963-64	5.397	1.57	32,137	32,095	1963	5.295	1.37	31,324
1964-65	5.653	4.73	35,047	35,114	1964	5.484	3.57	34,237
1965-66	5.953	5.30	37,662	37,617	1965	5.808	5.92	37,036
1966-67	6.251	5.01	40,140	40,135	1966	6.110	5.20	39,573
1967-68	6.425	2.79	42,739	42,848	1967	6.294	3.01	41,901
1968-69	6.753	5.10	46,959	46,979	1968	6.554	4.13	46,008
1969-70	7.207	6.73	50,971	51,027	1969	6.976	6.44	49,909
1970-71	7.920	9.89	57,859	57,946	1970	7.643	9.56	56,177
1971-72	8.517	7.54	64,651	64,551	1971	8.276	8.29	62,948
1972-73	9.244	8.54	74,012	74,118	1972	8.906	7.61	70,663
1973-74	10.060	8.83	82,965	82,985	1973	9.697	8.88	81,895
1974-75	12.088	20.16	98,243	98,415	1974	11.255	16.07	92,743
1975-76	15.047	24.47	120,905	120,793	1975	14.192	26.10	115,176
1976-77	17.142	13.92	142,000	142,503	1976	16.388	15.47	136,949
1977-78	19.501	13.77	165,996	165,797	1977	18.659	13.86	159,701
1978-79	21.685	11.20	192,181	192,299	1978	20.849	11.74	185,968
1979-80	25.345	16.88	232,495	232,519	1979	23.867	14.47	220,845
1980-81	30.202	19.16	267,471	267,777	1980	28,699	20.25	259,962
1981-82	33.375	10.51	297,954	297,398	1981	32,232	12.31	289,899
1982-83	35.807	7.29	327,120	327,387	1982	34,792	7.94	319,210
1983-84	37.510	4.75	357,828	357,041	1983	36,718	5.54	351,109
1984-85	39.625	5.64	385,681	384,907	1984	38,608	5.15	377,577
1985-86	41.801	5.49	423,462	424,075	1985	40,657	5.31	414,329
1986-87	43.531	4.14	455,085	455,821	1986	42,474	4.47	446,413
1987-88	45.965	5.59	510,371	510,593	1987	44,766	5.40	495,534
1988-89	48.944	6.48	569,310	570,202	1988	47,401	5.89	554,896
1989-90	52.714	7.70	627,117	626,826	1989	51,095	7.79	613,381
1990-91	57.034	8.19	676,943	678,559	1990	55,198	8.03	667,435
1991-92	60.310	5.74	712,877	711,492	1991	58,835	6.59	703,728
1992-93	61.836	2.53	734,387	736,200	1992	60,635	3.06	727,965
1993-94	63.340	2.43	778,018	775,578	1993	62,262	2.68	766,408
1994-95	64.106	1.21	815,769	815,425	1994	63,057	1.28	806,420
1995-96	66.075	3.07	859,841	859,753	1995	64,606	2.46	846,536
1996-97	68.402	3.52	916,578	915,611	1996	67,244	4.08	903,432
1997-98	68.854	0.66	959,331	959,532	1997	67,726	0.72	948,953
1998-99	69.743	1.29	1,003,372	1,004,504	1998	68,454	1.07	991,238
1999-00	70.009	0.38	1,045,091	1,042,993	1999	69,001	0.80	1,031,158
2000-01	71.588	2.25	1,099,246	1,098,678	2000	70,457	2.11	1,089,341
2001-02	72.305	1.00	1,141,377	1,141,412	2001	71,033	0.82	1,129,443
2002-03	74.098	2.48	1,200,616	1,200,595	2002	72,580	2.18	1,182,956
2003-04	75.636	2.08	1,268,445	1,267,512	2003	74,326	2.41	1,251,847
2004-05	77.674	2.69	1,327,919	1,326,989	2004	76,163	2.47	1,312,854
2005-06	79.710	2.62	1,412,939	1,412,673	2005	78,101	2.54	1,388,753
2006-07	82.079	2.97	1,487,530	1,482,862	2006	80,397	2.94	1,465,902
2007-08	84.113	2.48	1,558,747	1,562,650	2007	82,438	2.54	1,541,442
2008-09	86.396	2.71	1,563,555	1,563,625	2008	84,800	2.86	1,579,796
2009-10	87.620	1.42	1,547,137	1,545,491	2009	86,161	1.60	1,537,213
2010-11	89.250	1.86	1,606,602	1,607,470	2010	87,480	1.53	1,587,466
2011-12	90.423	1.31	1,650,370	1,650,902	2011	89,160	1.92	1,644,546
2012-13	92.244	2.01	1,710,685	1,709,904	2012	90,550	1.56	1,694,417
2013-14	93.936	1.83	1,781,350	1,782,241	2013	92,239	1.87	1,761,347
2014-15	95.143	1.28	1,855,049	1,857,707	2014	93,821	1.72	1,844,295
2015-16	95.904	0.80	1,912,472	1,913,870	2015	94,229	0.44	1,895,839
2016-17	98.088	2.28	1,989,398	1,991,226	2016	96,168	2.06	1,969,524
2017-18	100.000	1.95	2,066,856	2,064,363	2017	98,289	2.21	2,049,629
2018-19 ^{(1), (2)}	-	1.78	2,130,611	2,131,665	2018	100,000	1.74	2,114,627
2019-20 ^{(1), (2)}	-	2.00	2,199,839	2,199,987	2019 ^{(1), (2)}	-	1.98	2,182,436
2020-21 ^{(1), (2)}	-	1.84	2,274,802	2,274,314	2020 ^{(1), (2)}	-	1.84	2,254,754
2021-22 ^{(1), (2)</sup}								

Federal Reserve of St Louis, 2019a.
 FRED Graph Observations
 Federal Reserve Economic Data
 Link: <https://fred.stlouisfed.org>
 Help: <https://fred.stlouisfed.org/help-faq>
 Economic Research Division
 Federal Reserve Bank of St. Louis

GDPDEF Gross Domestic Product: Implicit Price Deflator, Index 2012=100, Quarterly, Seasonally Adjusted

Frequency: Quarterly	observation_date	GDPDEF	1947-01-01	1947-04-01	1947-07-01	1947-10-01	1948-01-01	1948-04-01	1948-07-01	1948-10-01	1949-01-01	1949-04-01	1949-07-01	1949-10-01	1950-01-01	1950-04-01	1950-07-01	1950-10-01	1951-01-01	1951-04-01	1951-07-01	1951-10-01	1952-01-01	1952-04-01	1952-07-01	1952-10-01	1953-01-01	1953-04-01	1953-07-01	1953-10-01	1954-01-01	1954-04-01	1954-07-01	1954-10-01	1955-01-01	1955-04-01	1955-07-01	1955-10-01	1956-01-01	1956-04-01	1956-07-01	1956-10-01	1957-01-01	1957-04-01	1957-07-01	1957-10-01	1958-01-01	1958-04-01	1958-07-01	1958-10-01	1959-01-01	1959-04-01	1959-07-01	1959-10-01	1960-01-01	1960-04-01	1960-07-01	1960-10-01	1961-01-01	1961-04-01	1961-07-01	1961-10-01	1962-01-01	1962-04-01	1962-07-01	1962-10-01	1963-01-01	1963-04-01	1963-07-01	1963-10-01	1964-01-01	1964-04-01	1964-07-01	1964-10-01	1965-01-01	1965-04-01	1965-07-01	1965-10-01	1966-01-01	1966-04-01	1966-07-01	1966-10-01	1967-01-01	1967-04-01	1967-07-01	1967-10-01	1968-01-01	1968-04-01	1968-07-01	1968-10-01	1969-01-01	1969-04-01	1969-07-01	1969-10-01	1970-01-01	1970-04-01	1970-07-01	1970-10-01	1971-01-01	1971-04-01	1971-07-01	1971-10-01	1972-01-01	1972-04-01	1972-07-01	1972-10-01	1973-01-01	1973-04-01	1973-07-01	1973-10-01	1974-01-01	1974-04-01	1974-07-01	1974-10-01	1975-01-01	1975-04-01	1975-07-01	1975-10-01	1976-01-01	1976-04-01	1976-07-01	1976-10-01	1977-01-01	1977-04-01	1977-07-01	1977-10-01	1978-01-01	1978-04-01	1978-07-01	1978-10-01	1979-01-01	1979-04-01	1979-07-01	1979-10-01	1980-01-01	1980-04-01	1980-07-01	1980-10-01	1981-01-01	1981-04-01	1981-07-01	1981-10-01	1982-01-01	1982-04-01	1982-07-01	1982-10-01	1983-01-01	1983-04-01	1983-07-01	1983-10-01	1984-01-01	1984-04-01	1984-07-01	1984-10-01	1985-01-01	1985-04-01	1985-07-01	1985-10-01	1986-01-01	1986-04-01	1986-07-01	1986-10-01	1987-01-01	1987-04-01	1987-07-01	1987-10-01	1988-01-01	1988-04-01	1988-07-01	1988-10-01	1989-01-01	1989-04-01	1989-07-01	1989-10-01	1990-01-01	1990-04-01	1990-07-01	1990-10-01	1991-01-01	1991-04-01	1991-07-01	1991-10-01	1992-01-01	1992-04-01	1992-07-01	1992-10-01	1993-01-01	1993-04-01	1993-07-01	1993-10-01	1994-01-01	1994-04-01	1994-07-01	1994-10-01	1995-01-01	1995-04-01	1995-07-01	1995-10-01	1996-01-01	1996-04-01	1996-07-01	1996-10-01	1997-01-01	1997-04-01	1997-07-01	1997-10-01	1998-01-01	1998-04-01	1998-07-01	1998-10-01	1999-01-01	1999-04-01	1999-07-01	1999-10-01	2000-01-01	2000-04-01	2000-07-01	2000-10-01	2001-01-01	2001-04-01	2001-07-01	2001-10-01	2002-01-01	2002-04-01	2002-07-01	2002-10-01	2003-01-01	2003-04-01	2003-07-01	2003-10-01	2004-01-01	2004-04-01	2004-07-01	2004-10-01	2005-01-01	2005-04-01	2005-07-01	2005-10-01	2006-01-01	2006-04-01	2006-07-01	2006-10-01	2007-01-01	2007-04-01	2007-07-01	2007-10-01	2008-01-01	2008-04-01	2008-07-01	2008-10-01	2009-01-01	2009-04-01	2009-07-01	2009-10-01	2010-01-01	2010-04-01	2010-07-01	2010-10-01	2011-01-01	2011-04-01	2011-07-01	2011-10-01	2012-01-01	2012-04-01	2012-07-01	2012-10-01	2013-01-01	2013-04-01	2013-07-01	2013-10-01	2014-01-01	2014-04-01	2014-07-01	2014-10-01	2015-01-01	2015-04-01	2015-07-01	2015-10-01	2016-01-01	2016-04-01	2016-07-01	2016-10-01	2017-01-01	2017-04-01	2017-07-01	2017-10-01	2018-01-01	2018-04-01	2018-07-01	2018-10-01	2019-01-01	2019-04-01	2019-07-01	2019-10-01	2020-01-01	2020-04-01	2020-07-01	2020-10-01	2021-01-01	2021-04-01	2021-07-01	2021-10-01	2022-01-01	2022-04-01	2022-07-01	2022-10-01	2023-01-01	2023-04-01	2023-07-01	2023-10-01	2024-01-01	2024-04-01	2024-07-01	2024-10-01	2025-01-01	2025-04-01	2025-07-01	2025-10-01	2026-01-01	2026-04-01	2026-07-01	2026-10-01	2027-01-01	2027-04-01	2027-07-01	2027-10-01	2028-01-01	2028-04-01	2028-07-01	2028-10-01	2029-01-01	2029-04-01	2029-07-01	2029-10-01	2030-01-01	2030-04-01	2030-07-01	2030-10-01	2031-01-01	2031-04-01	2031-07-01	2031-10-01	2032-01-01	2032-04-01	2032-07-01	2032-10-01	2033-01-01	2033-04-01	2033-07-01	2033-10-01	2034-01-01	2034-04-01	2034-07-01	2034-10-01	2035-01-01	2035-04-01	2035-07-01	2035-10-01	2036-01-01	2036-04-01	2036-07-01	2036-10-01	2037-01-01	2037-04-01	2037-07-01	2037-10-01	2038-01-01	2038-04-01	2038-07-01	2038-10-01	2039-01-01	2039-04-01	2039-07-01	2039-10-01	2040-01-01	2040-04-01	2040-07-01	2040-10-01	2041-01-01	2041-04-01	2041-07-01	2041-10-01	2042-01-01	2042-04-01	2042-07-01	2042-10-01	2043-01-01	2043-04-01	2043-07-01	2043-10-01	2044-01-01	2044-04-01	2044-07-01	2044-10-01	2045-01-01	2045-04-01	2045-07-01	2045-10-01	2046-01-01	2046-04-01	2046-07-01	2046-10-01	2047-01-01	2047-04-01	2047-07-01	2047-10-01	2048-01-01	2048-04-01	2048-07-01	2048-10-01	2049-01-01	2049-04-01	2049-07-01	2049-10-01	2050-01-01	2050-04-01	2050-07-01	2050-10-01	2051-01-01	2051-04-01	2051-07-01	2051-10-01	2052-01-01	2052-04-01	2052-07-01	2052-10-01	2053-01-01	2053-04-01	2053-07-01	2053-10-01	2054-01-01	2054-04-01	2054-07-01	2054-10-01	2055-01-01	2055-04-01	2055-07-01	2055-10-01	2056-01-01	2056-04-01	2056-07-01	2056-10-01	2057-01-01	2057-04-01	2057-07-01	2057-10-01	2058-01-01	2058-04-01	2058-07-01	2058-10-01	2059-01-01	2059-04-01	2059-07-01	2059-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