

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
S2.1. Phys - Fisheries	Estimation of fisheries benefits supported by the natural environment.	Supporting schedule
S2.2. Phys - Agriculture	Estimation of agriculture benefits supported by the natural environment.	Supporting schedule
S2.3. Phys - Tourism	Estimation of tourism benefits produced by the natural environment.	Supporting schedule
S2.4. Phys - Local Cultural Services	Estimation of the local cultural benefits supported by the natural environment.	Supporting schedule
S2.5. Phys - Heritage Salt Pond		Supporting schedule
S2.6. Phys - Iconic Species	Estimation of local cultural services benefits supported by the natural environment.	Supporting schedule
S2.7. Phys - Carbon Sequestration	Estimation of the carbon sequestration benefits provided by the natural environment.	Supporting schedule
S2.8. Phys - Carbon Retention	Estimation of avoided carbon losses resulting from current land management practices.	Supporting schedule
S2.9. Phys - Coastal Hazard Protection	Estimation of coastal defence benefits supported by the natural environment.	Supporting schedule
S2.10. Phys - Terrestrial Hazard Protection	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
S3.1. \$ - Fisheries	Estimation of the value fisheries benefits from the natural environment.	Supporting schedule
S3.2. \$ - Agriculture	Estimation of the value of agriculture from the natural environment.	Supporting schedule
S3.3. \$ - Tourism	Estimation of the value of tourism benefits from the natural environment.	Supporting schedule
S3.4. \$ - Local Cultural Services	Estimation of the value of local cultural services supported by the natural environment.	Supporting schedule
S3.5. \$ - Heritage Salt Pond		Supporting schedule
S3.6. \$ - Iconic Species	Estimation of the value of local cultural services benefits from the natural environment.	Supporting schedule
S3.7. \$ - Carbon Sequestration	Estimation of the value of carbon sequestration benefits from the natural environment.	Supporting schedule
S3.8. \$ - Carbon Retention	Estimation of the value of avoided carbon losses.	Supporting schedule
S3.9. \$ - Coastal Hazard Protection	Estimation of the value of coastal defence from the natural environment.	Supporting schedule
S3.10. \$ - Terrestrial Hazard Protection	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

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.

This box describes an overview of the tab.

Baseline (2017/2018)	
Total value	xx number per year

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	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	xxx	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								
Ecosystem services		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	Seasonal wetlands
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							
Ecosystem services		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 dequstration														
	Windbreak														
	Water quality regulation														
Cultural services	Buffer - noise, dust														
	Air quality - filtering of air by trees/plants														
	Tourism														
	Local recreation														
	Historical and archaeological values														
	Spiritual values														
Supporting services	Iconic species														
	Education and Research														
	Primary production														
	Nutrient cycling														
Supporting services	Ecosystem protection														
	Habitat provisioning														

Key

Priority asset-service provision

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	25 years
At May 2019	Annual Value		Annual Value (EC\$)		PV (EC\$)
Benefits					
Fisheries	2,418,933	lb caught per year	39,342,000	Average price received for total fish caught each year	671,110,000
Agriculture	85,824	lb 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
			56,000	Avoided accommodation tax revenue lost due to water damage	948,000
Infrastructure damage	96,298	Square feet avoided damage in storm surge zones	9,806,000	Total avoided infrastructure damage cost	167,276,000
Terrestrial hazard protection					
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	
Habitat	Bare ground	Bare Ground	3,190,116	892	
	Beach	Beach classification	1,522,543	163	
	Buildings	Buildings	1,919,022	7,682	
	Cultivated land		Agriculture	722,087	67
			Fallow	2,206,676	186
			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	478	1
	Dry forest		Mineral Dry Forest	17,642	1
			Total	18,120	2
			Ironshore	Ironshore classification	2,201,295
	Mangrove	Mangrove	1,194,680	103	
	Open water	Ponds classification	2,973,613	57	
	Recreation		Recreation	64,499	53
			Golf course	332,619	20
			Total	397,119	73
	Roads	Road	2,577,944	1,392	
	Scrub		Mineral Scrub	3,533,024	474
			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				
	Of which	Agriculture	37,620	tCO2e	See <i>Carbon Retention</i> tab.	The calculations for these carbon storage values are presented in <i>Carbon Retention</i> tab.
		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). Johnson, J., Carter, D., MacDonald, M., Bradbury, R., Mukhida, F., 2014. Ecosystem services Provided by Potential Protected Areas in Anguilla: A Rapid Ecosystem Assesment. Anguilla: Anguilla National Trust	The species has not been surveyed on Island 270 pairs 113,000 breeding pairs - 2007 495 breeding pairs - 2004 790 breeding pairs - where text states '>' individuals have not been summed	
	Bridled Terns (<i>Onychoprion anaethetus</i>)	540				
	Sooty Tern (<i>Onychoprion fuscatus</i>)	226,000				
	Brown Booby (<i>Sula leucogaster</i>)	990				
	Least Tern (<i>Sterna 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>Dermodochelys coriacea</i>)	Nest				

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 Fish (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		
		Excurtionists	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			
	Local Anguilla resident population	15,045	Population		
Heritage Value of Salt Ponds	Number of people within 200m	Road Salt Pond	377	Number of buildings within 200m	
		West End Pond	198		
	Total	575			
Carbon Sequestration	By habitat type	Dry forest	37	tCO2e/yr	
		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

S2.4 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

ID	Description	Source	Value	Unit	Notes
2.4a	ANT Heritage Site Tour	Anguilla National Trust (provided by Anguilla Depart	279	Number of local attendees	This does not include Monthly Members activities
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			
ANT Dates with Nature Attendees	588	588	588	588	588	588	588	588	588	588	588	588			
Anguilla Population	15,889	15,911	15,933	15,955	15,977	15,974	15,970	15,967	15,963	15,960	15,938.4	15,916.8	15,895.2	15,873.6	15,852

Monetary Account

Benefit	Indicator	Baseline year (EC\$)	PV 25 (EC\$)	Notes	
Fisheries	Total value by species	Spiny lobster (panulirus argus)	\$ 17,785,004	\$ 303,383,138	East Carribbean Dollar
		Queen Conch (Strombus gigas)	\$ 2,165,315	\$ 36,936,747	
		Reef fish (mixed)	\$ 14,166,360	\$ 241,654,977	
		Other Finish (mixed)	\$ 5,225,295	\$ 89,135,004	
		Total	\$ 39,341,975	\$ 671,109,866	
Agriculture	Total value by agricultural produce	Beets	\$ 1,011	\$ 17,245	East Carribbean Dollar
		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	East Carribbean Dollar
		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 santuaries / 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	East Carribbean Dollar
		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	East Caribbean Dollar
		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	\$ 9,475,952	
		Accommodation tax revenue lost	\$ 55,550	\$ 947,595	
	Infrastructure damage avoided				Values are based on the difference between with and without natural capital.
	Avoided damage	Low	-\$ 327,007	-\$ 5,578,198	
		Medium	\$ 6,139,539	\$ 104,730,516	
High		\$ 3,993,577	\$ 68,123,909		
Total	\$ 9,806,110	\$ 167,276,228			
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
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/pi/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%	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																									

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	\$ 913,410	\$ 882,522	\$ 852,678	\$ 823,844
Total subsistence value - Spiny Lobster	\$ 10,671,002	\$ 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	\$ 5,362,882	\$ 5,181,528	\$ 5,006,308	\$ 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	\$ 1,021,151	\$ 986,619	\$ 953,255	\$ 921,020	\$ 889,874	\$ 859,782	\$ 830,707	\$ 802,615	\$ 775,474	\$ 749,250	\$ 723,913	\$ 699,433	\$ 675,781	\$ 652,928	\$ 630,849	\$ 609,515	\$ 588,904	\$ 568,989
Total subsistence value - Reef fish (mixed)	\$ 8,499,816	\$ 8,212,383	\$ 7,934,669	\$ 7,666,347	\$ 7,407,099	\$ 7,156,617	\$ 6,914,606	\$ 6,680,779	\$ 6,454,859	\$ 6,236,578	\$ 6,025,679	\$ 5,821,913	\$ 5,625,036	\$ 5,434,818	\$ 5,251,032	\$ 5,073,460	\$ 4,901,894	\$ 4,736,130	\$ 4,575,971	\$ 4,421,228	\$ 4,271,718	\$ 4,127,263	\$ 3,987,694	\$ 3,852,844	\$ 3,722,555
Total subsistence value - Other finfish (mixed)	\$ 3,135,177	\$ 3,029,157	\$ 2,926,721	\$ 2,827,750	\$ 2,732,126	\$ 2,639,735	\$ 2,550,469	\$ 2,464,221	\$ 2,380,890	\$ 2,300,376	\$ 2,222,586	\$ 2,147,426	\$ 2,074,808	\$ 2,004,645	\$ 1,936,855	\$ 1,871,358	\$ 1,808,075	\$ 1,746,932	\$ 1,687,857	\$ 1,630,780	\$ 1,575,633	\$ 1,522,351	\$ 1,470,870	\$ 1,421,131	\$ 1,373,073

Calculations - 25 year PV

Total export value - Spiny Lobster (<i>Panulirus argus</i>)	\$ 12,135,326
Total export value - Queen conch (<i>Strombus gigas</i>)	\$ -
Total export value - Reef fish (mixed)	\$ 9,666,199
Total export value - Other finfish (mixed)	\$ 3,565,400
Total domestic value - Spiny Lobster (<i>Panulirus argus</i>)	\$ 109,217,930
Total domestic value - Queen Conch (<i>Strombus gigas</i>)	\$ 14,774,699
Total domestic value - Reef fish (mixed)	\$ 86,995,792
Total domestic value - Other finfish (mixed)	\$ 32,088,601
Total subsistence value - Spiny Lobster	\$ 182,029,883
Total subsistence value - Queen Conch	\$ 22,162,048
Total subsistence value - Reef fish (mixed)	\$ 144,992,986
Total subsistence value - Other finfish (mixed)	\$ 53,481,002

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	EC \$
Total ANT Tours	\$ 89,267	\$ 1,522,750	
Value of cultural services for local population	\$ 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.axanatio)	50	US \$	2018	
3.4b	ANT Heritage Tour - Price Child	Anguilla National Trust (http://www.axanatio)	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 dependence	Assumption	38%	Proportion	2018	
3.4f	ANT Dates with Nature - Price	Anguilla National Trust (http://www.axanatio)	50	US\$	2018	
3.4g	ANT Dates with Nature - Factor of Ecosystem Dependence	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 "Recreation Values"	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	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	IndexMundia 2019a (https://www.indexmundi)	12,200	US \$	2008	
3.4n	USA PPP per capita	IndexMundi 2019b (https://www.indexmundi)	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 and equal split between adults and children attending the ANT Heritage Tour
3.4r	Value of cultural services		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 used	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 population	\$ 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 population	\$ 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/Assumpt	Explanation
3.5.1			
3.5.2			
3.5.3			
3.5.4	Discount	Discount facto	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

Calculations - 25 year PV	
	0.00
	0.00

S3 Monetary flow account
S3.6 Carbon Sequestration

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

ID	Description	Source	Value	Units	Year	Notes
3.6a	Central non-traded value of carbon	Department for Business, Energy, See Carbon Prices tab		£	2018	The central non-traded value of carbon is applied, as the EU Emissions Trading Scheme does
3.6b	GBP to ECD exchange rate	HM Revenue and Customs, 2016	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 online: Office for National Statistics, 2019. Gross domestic product per head: Table p. Available	2017 US \$ 18,861	2017 EC \$ 50,925		
3.6e	UK GDP per capita	Office for National Statistics, 2019. Gross domestic product per head: Table p. Available	2015 GBP (base year) 29,670	2017 GDP 30,948	2017 EC \$ 112,342	
3.6f	UK GDP deflator	See UK GDP Deflator tab	2015 100	2017 104.31	Deflator 1.04	Rebased to 2015=100
3.6g	UK : Anguilla ratio	Calculation	2.21			

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

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 CO2e (2.7.3)
3.6.4	Discount	Discount factor	Apply appropriate discount rate

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																								
Carbon Price (£)	67	68	69	70	72	73	74	75	76	77	79	80	81	88	96	103	111	118	126	133	141	148	156	163	171
Carbon Prices (£ - adjusted f	30	31	31	32	33	34	35	35	36	36	37	40	43	47	50	54	57	60	64	67	71	74	77		
Carbon Prices (ECD)	111	112	114	116	118	120	122	123	125	127	129	131	133	145	158	170	182	195	207	219	232	244	256	269	281

Bare ground	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Beach	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Buildings	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Cultivated land	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Developed Land	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Disturbed area	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Dry forest	\$ 4,047	\$ 40	\$ 39	\$ 38	\$ 38	\$ 37	\$ 36	\$ 35	\$ 35	\$ 34	\$ 33	\$ 33	\$ 32	\$ 34	\$ 36	\$ 37	\$ 38	\$ 40	\$ 41	\$ 42	\$ 43	\$ 43	\$ 44	\$ 45	\$ 45
Ironshore	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Mangrove	\$ 84,404	\$ 82,773	\$ 81,173	\$ 79,735	\$ 78,302	\$ 76,874	\$ 75,454	\$ 74,041	\$ 72,638	\$ 71,245	\$ 69,863	\$ 68,493	\$ 67,136	\$ 70,889	\$ 74,311	\$ 77,421	\$ 80,236	\$ 82,771	\$ 85,044	\$ 87,068	\$ 88,858	\$ 90,427	\$ 91,788	\$ 92,954	\$ 93,937
Open Water	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Recreation	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Road	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Scrub	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Thicket	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Seagrass	\$ 745,474	\$ 731,069	\$ 716,942	\$ 704,242	\$ 691,582	\$ 678,972	\$ 666,425	\$ 653,950	\$ 641,556	\$ 629,253	\$ 617,048	\$ 604,949	\$ 592,962	\$ 626,109	\$ 656,337	\$ 683,803	\$ 708,662	\$ 731,057	\$ 751,127	\$ 769,004	\$ 784,813	\$ 798,673	\$ 810,699	\$ 820,997	\$ 829,673
Unknown	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

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

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

Revenue (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	\$	1,983,335	\$ 33,842,685
	Accommodation tax revenue lost	\$	198,333	\$ 3,384,269
Without natural capital	Hotel revenue lost in a year due to closure	\$	2,539,484	\$ 43,394,827
	Accommodation tax revenue lost	\$	253,948	\$ 4,314,864
Avoided revenue lost	Hotel revenue lost in a year due to closure	\$	656,160	\$ 11,473,923
	Accommodation tax revenue lost	\$	65,616	\$ 1,147,595
Infrastructure damage				
With natural capital	Low	\$	1,794,841	\$ 30,617,058
	Medium	\$	23,077,816	\$ 393,666,450
	High	\$	9,928,204	\$ 169,369,854
Without natural capital	Low	\$	1,447,834	\$ 25,038,860
	Medium	\$	20,717,166	\$ 351,386,961
	High	\$	13,921,781	\$ 237,482,863
Avoided damage	Low	\$	327,037	\$ 5,576,108
	Medium	\$	4,136,538	\$ 70,730,514
	High	\$	3,993,577	\$ 68,123,909

ID	Description	Source	Value	Units	Year	Notes
3.7a	Revenue per available room (ECR) in the Caribbean region	317C: Caribbean 2018 hotel performance. Available at: http://tourism.ec.gov.tt/research/2018-19-ecr	\$ 366	EC\$/Year	2018	This is a regional Caribbean value, estimated based on a survey of more than 1,000 hotels in the Caribbean (roughly 200,000 rooms). Revenue per available room (RevPAR) is a hotel performance indicator that is estimated based on the average daily rate multiplied by the occupancy rate in a given year.
3.7b	Anguilla accommodation tax rate	Government of Anguilla, (2018) www.gov.angillia.gov	10%	Percentage	2019	
3.7c	Water damage proportions by hotel type (i.e. near-shore and off-shore)	On-shore: 20% Near-shore: 5%		Percentage		
3.7d	Water damage proportions for each hotel	Hotel type (2, 3b, 1ab, 2, 3c) and 3.7c water damage proportions.		Percentage		Hotel ID is from either hotel log, part of which has been shared with Anguilla Department of Environment (Copy of Hotel log (MCO) ECHT_20220119 (4).)
3.7e	Damage cost per square foot	Visdon GIS Analysis and 3.7c		EC\$/ft²		The lower bound scenario: Damage cost has been applied to Low Risk Storm Surge Zones (1-3). While the Damage cost per square foot for medium and high have been scaled according to the range between \$50 and \$200. More detail is given in assumption 3.7e.
3.7f	Employment in Travel and Tourism on Anguilla	World Travel & Tourism Council (2018). Travel & Tourism Economic Impact 2018 Anguilla. Available at: http://www.wttw.org/research/2018	1,530,000	Number	2018	Employment includes both part-time and full-time employees. Assumption 3.7e defines which jobs are included in the counts shown.
3.7g	UK employment and FTEs in tourism industries (2016)	CNS, (2016). The UK Tourism Satellite Account (UK TSA) 2016. Available at: http://www.cns.gov.uk/economy	1,540,000	Number	2016	See Assumption 3.7f
3.7h	Estimate avoided loss in employment and FTEs due to hotel closure	Avoided loss of direct employment in tourism & travel on Anguilla (3.7f) by the natural capital protection proportion (3.7d).	420	Number	2018	

ID	Description	Source	Evaluation
3.7i	Water damage proportions	Deep beach research and engagement with Anguilla visitors	Following deep beach research and engagement with Anguilla visitors, 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 surveys are reported as 'any cause' (i.e. total damage regardless of cause). 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 effects reported 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 damage sustained by a coastal property is as a result of water damage, while 80% of damage sustained by a non-shore property is as a result of water damage. These proportions can be adjusted to reflect better information if available.
3.7j	10	Visdon GIS analysis	The underlying GIS model has included a low-probability event, similar to the scale of Hurricanes 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 not known, but a conservative assumption of once every 10 years has been made. This can be adjusted to future to reflect better information, along with taking into consideration the impacts of climate change. This can be adjusted to reflect better information if available.
3.7k	28%	Visdon GIS analysis	Assessment on natural capital protection estimated at the total damage costs in the depleted scenarios, divided by the total damage costs in the baseline (with natural capital) scenario. Indicates how much water damage would be avoided by natural capital. This can be adjusted to the future to reflect better information if available.
3.7l	Reput and rebuild costs	Discussions with insurers on the impact revealed that in general the cost to Anguilla to rebuild and repair ranged between US\$90 and US\$200. Contractions were contacted on a case by case basis on the style of the rebuild but all natural capital cost in this area is assumed to be US\$100. Conversion rate between US\$ and EC\$. Assumed to be US\$100 = EC\$100.	
3.7m	2.7	World Travel & Tourism Council (2018). Travel & Tourism Economic Impact 2018 Anguilla. Available at: http://www.wttw.org/economy	Conversion rate between US\$ and EC\$. Assumed to be US\$100 = EC\$100.
3.7n	Definition of jobs in travel and tourism	Travel and tourism jobs includes 'employment by hotels, travel agents, airlines and other passenger transportation services (incl. commuter services). It also includes, for example, the activities of the restaurant and leisure industries directly supported by travel and tourism'.	
3.7o	UK tourism industry as a proxy for Anguilla	World Travel & Tourism Council (2018). Travel & Tourism Economic Impact 2018 Anguilla. Available at: http://www.wttw.org/economy	

Step	Description	Data/Assumptions used	Evaluation
3.7.1	Estimate the hotel revenue lost per day	3.7b and 3.7a	For each hotel, multiply the number of rooms (2.8b) 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	2.7e	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 lost	3.7b	For each hotel, multiply the estimated hotel revenue lost in a year due to closure (Step 3.7.2) by Anguilla's accommodation tax rate (3.7b), to produce the loss in accommodation tax revenue that accrues to the government. Calculations shown below.
3.7.4	Estimate revenue lost due to water damage	3.7c, 3.7d and 3.7f	Based on whether a hotel is on-shore or near-shore (3.7c) 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, 3.7.4	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 and 3.7.6 and 3.7g	For both total revenue lost and revenue lost due to water damage, estimate annual values of total revenue lost in year and accommodation tax revenue lost by dividing sums calculated as per Step 3.7.5 and 3.7.6 by the assumed storm frequency (3.7g). Calculations shown below.
3.7.8	Estimate annual values without Natural Capital	3.7.5, 3.7.6, 3.7g and 3.7h	To estimate the annual damages if there was no Natural Capital on Anguilla, repeat Step 3.7.7 and 3.7.8 by the assumed proportion of protection that is attributable to natural capital (3.7h). Calculations shown below.
3.7.9	Estimate the avoided loss in employment	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 for estimated revenue lost due to water damage for each component and each 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 3.7.8	Multiply the direct employment contribution in Travel and Tourism on Anguilla (3.7f) by the assumed proportion of protection that is attributable to natural capital (3.7h), the product is the avoided loss of direct employment in tourism and travel on Anguilla in 2018 (3.7i). 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 FTE in equivalent.
3.7.13	Estimate avoided loss in full-time employment	3.7.7, 3.7.8 and 3.7o	Multiply the avoided loss of direct employment in tourism and travel on Anguilla (3.7i) by the employment to FTE ratio (3.7o), the product is the avoided loss of FTEs in tourism and travel on Anguilla in 2018.
3.7.14	Convert damage cost per square foot from US\$ to EC\$	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, 3.7.7, 3.7.8 and 3.7e	Multiply the damage cost per square foot (EC\$) by the total square foot affected in each storm surge zone for both with and without natural capital (2.7g). Calculations shown below.
3.7.16	Estimate the total avoided building damage	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.

Annual values - Hotel closures		Annual values - Building damage	
With Natural Capital	Without Natural Capital	With Natural Capital	Without Natural Capital
Hotel revenue lost in a year due to closure	\$ 1,185,048.70	\$ 14,316,962.33	\$ 31,311,813.63
Accommodation tax revenue lost	\$ 118,504.87	\$ 1,431,696.23	\$ 3,131,181.36
Annual revenue loss due to water damage	\$ 1,983,336.56	\$ 2,539,438.24	\$ 5,552,111.48
Avoided revenue lost	\$ 198,333.46	\$ 253,943.62	\$ 65,561.17

Category	With Natural Capital	Without Natural Capital	Avoided
Annual values - Hotel closures			
Total annual revenue loss	\$ 1,185,048.70	\$ 14,316,962.33	\$ 31,311,813.63
Annual revenue loss due to water damage	\$ 1,983,336.56	\$ 2,539,438.24	\$ 5,552,111.48
Avoided revenue lost	\$ 198,333.46	\$ 253,943.62	\$ 65,561.17
Annual values - Building damage			
Low	\$ 1,794,841.00	\$ 1,467,834.00	\$ 327,007.00
Medium	\$ 23,077,816.00	\$ 29,154,754.00	\$ 6,076,938.00
High	\$ 9,928,204.00	\$ 13,921,781.00	\$ 3,993,577.00
Annual values - Discounting			
Year (discount)	2018	2019	2020
Discount Rate	3.00%	3.00%	3.00%
Discount Factor	0.97087	0.94133	0.91267
Time horizon	25	25	25

Category	With Natural Capital	Without Natural Capital	Avoided
Hotel closures - 2018 PV			
Hotel revenue lost in a year due to closure	\$ 1,185,048.70	\$ 14,316,962.33	\$ 31,311,813.63
Accommodation tax revenue lost	\$ 118,504.87	\$ 1,431,696.23	\$ 3,131,181.36
Annual revenue loss due to water damage	\$ 1,983,336.56	\$ 2,539,438.24	\$ 5,552,111.48
Avoided revenue lost	\$ 198,333.46	\$ 253,943.62	\$ 65,561.17
Building damage - 2018 PV			
Low	\$ 1,794,841.00	\$ 1,467,834.00	\$ 327,007.00
Medium	\$ 23,077,816.00	\$ 29,154,754.00	\$ 6,076,938.00
High	\$ 9,928,204.00	\$ 13,921,781.00	\$ 3,993,577.00

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

	Central prices		Central prices		
	(2018/£)	(2017/£)	(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

GDP DEFLATORS 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					Calendar year			
GDP deflator at market prices		Money GDP ^{(3),(4)}			GDP deflator at market prices		Money GDP ⁽³⁾	
Financial year	2017-18 = 100	per cent change on previous year	Cash £ million Non-Seasonally Adjusted	Cash £ million Seasonally Adjusted	Calendar year	2018 = 100	per cent change on previous year	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)}	-	1.94	2,355,228	2,355,501	2021 ^{(1),(2)}	-	1.92	2,334,801
2022-23 ^{(1),(2)}	-	1.95	2,439,946	2,439,921	2022 ^{(1),(2)}	-	1.95	2,418,509
2023-24 ^{(1),(2)}	-	2.00	2,528,665	2,528,573	2023 ^{(1),(2)}	-	1.99	2,505,889

Sources and footnotes:

GDP Deflator: Financial years 1955-56 to 2017-18 taken from ONS series L8GG in data tables: Table N.

<https://www.ons.gov.uk/file?uri=/economy/grossdomesticproductgdp/datasets/uksecondestimateofgdpdatatables/quarter4octodec2018firstestimate/firstquarterlyestimateofgdpdatatables.xls>

Calendar years 1955 to 2018 taken from ONS series MNF2 in data tables: Table O.

<https://www.ons.gov.uk/file?uri=/economy/grossdomesticproductgdp/datasets/uksecondestimateofgdpdatatables/quarter4octodec2018firstestimate/firstquarterlyestimateofgdpdatatables.xls>

For years 2018-19 to 2023-24 (2019 to 2023): taken from the Office for Budgetary Responsibility (OBR) forecasts for GDP deflator increases as of March 2019 Economy supplementary tables.

<https://obr.uk/efo/economic-fiscal-outlook-march-2019/>

Money GDP: For years 1955-56 to 2017-18 (1955 to 2018): ONS data for money GDP not seasonally adjusted series BKTL in data tables: Table N.

<https://www.ons.gov.uk/file?uri=/economy/grossdomesticproductgdp/datasets/uksecondestimateofgdpdatatables/quarter4octodec2018firstestimate/firstquarterlyestimateofgdpdatatables.xls>

For years 1955-56 to 2017-18: ONS data for money GDP seasonally adjusted series YBHA in data tables: Table N.

<https://www.ons.gov.uk/file?uri=/economy/grossdomesticproductgdp/datasets/uksecondestimateofgdpdatatables/quarter4octodec2018firstestimate/firstquarterlyestimateofgdpdatatables.xls>

For years 2018-19 to 2023-24 (2019 to 2023): taken from the Office for Budgetary Responsibility (OBR) forecasts for GDP deflator increases as of March 2019 Economy supplementary tables.

<https://obr.uk/efo/economic-fiscal-outlook-march-2019/>

Footnotes:

⁽¹⁾ For years 2018-19 to 2023-24 (2019 to 2023), this presentation only shows percentage changes in line with OBR data as of the Spring Statement 2019.

⁽²⁾ For years 2018-19 to 2023-24 (2019 to 2023), money GDP forecasts from the OBR as of the Spring Statement 2019.

⁽³⁾ Non-Seasonally adjusted money GDP (BKTL) from 1955-56 to 2017-18 (1955 to 2018) consistent with ONS First Quarterly Estimate of GDP release of 11 February 2019.

⁽⁴⁾ Seasonally adjusted money GDP (YBHA) from 1955-56 to 2017-18 consistent with ONS First Quarterly Estimate of GDP release of 11 February 2019.

⁽⁵⁾ For further information and the 'User's Guide' to these series, please visit the following page on the GOV.UK website at: <https://www.gov.uk/government/publications/gross-domestic-product-gdp-deflators-user-guide>

⁽⁶⁾ For practical examples of how to use the GDP deflator series, please visit the following page on the GOV.UK website at: <https://www.gov.uk/government/publications/how-to-use-the-gdp-deflator-series-practical-examples>

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	11.960	1975-01-01	29.129	2003-01-01	82.025	100
1947-04-01	12.131	1975-04-01	29.562	2003-04-01	82.266	100.2938129
1947-07-01	12.335	1975-07-01	30.084	2003-07-01	82.712	100.8375495
1947-10-01	12.639	1975-10-01	30.587	2003-10-01	83.201	101.4337092
1948-01-01	12.739	1976-01-01	30.911	2004-01-01	83.820	102.1883572
1948-04-01	12.854	1976-04-01	31.222	2004-04-01	84.504	103.0222493
1948-07-01	13.092	1976-07-01	31.626	2004-07-01	85.056	103.6952149
1948-10-01	13.132	1976-10-01	32.192	2004-10-01	85.712	104.494971
1949-01-01	13.062	1977-01-01	32.711	2005-01-01	86.391	105.3227674
1949-04-01	12.931	1977-04-01	33.172	2005-04-01	86.996	106.0603475
1949-07-01	12.872	1977-07-01	33.576	2005-07-01	87.783	107.019811
1949-10-01	12.873	1977-10-01	34.301	2005-10-01	88.489	107.8805242
1950-01-01	12.853	1978-01-01	34.800	2006-01-01	89.107	108.6339531
1950-04-01	12.897	1978-04-01	35.465	2006-04-01	89.852	109.5422127
1950-07-01	13.177	1978-07-01	36.067	2006-07-01	90.481	110.3090521
1950-10-01	13.425	1978-10-01	36.806	2006-10-01	90.815	110.716245
1951-01-01	13.909	1979-01-01	37.476	2007-01-01	91.708	111.8049375
1951-04-01	14.002	1979-04-01	38.394	2007-04-01	92.301	112.5278878
1951-07-01	14.010	1979-07-01	39.234	2007-07-01	92.776	113.1069796
1951-10-01	14.170	1979-10-01	39.962	2007-10-01	93.145	113.5568424
1952-01-01	14.163	1980-01-01	40.801	2008-01-01	93.489	113.9762268
1952-04-01	14.180	1980-04-01	41.772	2008-04-01	93.990	114.5870162
1952-07-01	14.339	1980-07-01	42.705	2008-07-01	94.690	115.4404145
1952-10-01	14.378	1980-10-01	43.818	2008-10-01	94.986	115.8012801
1953-01-01	14.381	1981-01-01	44.972	2009-01-01	94.976	115.7890887
1953-04-01	14.409	1981-04-01	45.863	2009-04-01	94.838	115.6208473
1953-07-01	14.470	1981-07-01	46.726	2009-07-01	94.938	115.7427614
1953-10-01	14.497	1981-10-01	47.534	2009-10-01	95.259	116.1341055
1954-01-01	14.543	1982-01-01	48.188	2010-01-01	95.499	116.4266992
1954-04-01	14.556	1982-04-01	48.814	2010-04-01	95.943	116.9679976
1954-07-01	14.575	1982-07-01	49.506	2010-07-01	96.222	117.3081378
1954-10-01	14.615	1982-10-01	50.019	2010-10-01	96.763	117.9676928
1955-01-01	14.683	1983-01-01	50.397	2011-01-01	97.283	118.6016458
1955-04-01	14.744	1983-04-01	50.771	2011-04-01	97.922	119.3806766
1955-07-01	14.847	1983-07-01	51.311	2011-07-01	98.553	120.1499543
1955-10-01	14.995	1983-10-01	51.700	2011-10-01	98.703	120.3328254
1956-01-01	15.144	1984-01-01	52.223	2012-01-01	99.320	121.0850351
1956-04-01	15.234	1984-04-01	52.670	2012-04-01	99.713	121.5641573
1956-07-01	15.425	1984-07-01	53.138	2012-07-01	100.225	122.1883572
1956-10-01	15.487	1984-10-01	53.536	2012-10-01	100.737	122.8125571
1957-01-01	15.700	1985-01-01	54.065	2013-01-01	101.139	123.3026516
1957-04-01	15.810	1985-04-01	54.413	2013-04-01	101.431	123.6586407
1957-07-01	15.904	1985-07-01	54.741	2013-07-01	101.918	124.2523621
1957-10-01	15.915	1985-10-01	55.047	2013-10-01	102.517	124.9826272
1958-01-01	16.087	1986-01-01	55.321	2014-01-01	102.895	125.4434624
1958-04-01	16.134	1986-04-01	55.531	2014-04-01	103.539	126.2285888
1958-07-01	16.232	1986-07-01	55.758	2014-07-01	104.029	126.8259677
1958-10-01	16.309	1986-10-01	56.062	2014-10-01	104.233	127.0746724
1959-01-01	16.347	1987-01-01	56.418	2015-01-01	104.148	126.9710454
1959-04-01	16.372	1987-04-01	56.809	2015-04-01	104.738	127.6903383
1959-07-01	16.435	1987-07-01	57.239	2015-07-01	105.117	128.1523926
1959-10-01	16.499	1987-10-01	57.695	2015-10-01	105.145	128.1865285
1960-01-01	16.566	1988-01-01	58.147	2016-01-01	105.055	128.0768059
1960-04-01	16.607	1988-04-01	58.713	2016-04-01	105.778	128.9582444
1960-07-01	16.665	1988-07-01	59.415	2016-07-01	106.172	129.4385858
1960-10-01	16.714	1988-10-01	59.929	2016-10-01	106.720	130.1066748
1961-01-01	16.750	1989-01-01	60.553	2017-01-01	107.275	130.7832978
1961-04-01	16.789	1989-04-01	61.198	2017-04-01	107.580	131.1551356
1961-07-01	16.832	1989-07-01	61.645	2017-07-01	108.097	131.7854313
1961-10-01	16.885	1989-10-01	62.084	2017-10-01	108.824	132.6717464
1962-01-01	16.972	1990-01-01	62.754	2018-01-01	109.371	133.3386163
1962-04-01	16.999	1990-04-01	63.457	2018-04-01	110.266	134.429747
1962-07-01	17.035	1990-07-01	64.001	2018-07-01	110.679	134.9332521
1962-10-01	17.070	1990-10-01	64.477	2018-10-01	111.215	135.5867114
1963-01-01	17.145	1991-01-01	65.109			
1963-04-01	17.175	1991-04-01	65.587			
1963-07-01	17.198	1991-07-01	66.099			
1963-10-01	17.337	1991-10-01	66.492			
1964-01-01	17.392	1992-01-01	66.739			
1964-04-01	17.432	1992-04-01	67.140			
1964-07-01	17.502	1992-07-01	67.468			
1964-10-01	17.581	1992-10-01	67.932			
1965-01-01	17.670	1993-01-01	68.313			
1965-04-01	17.751	1993-04-01	68.719			
1965-07-01	17.819	1993-07-01	69.128			
1965-10-01	17.942	1993-10-01	69.505			
1966-01-01	18.057	1994-01-01	69.837			
1966-04-01	18.205	1994-04-01	70.174			
1966-07-01	18.381	1994-07-01	70.577			
1966-10-01	18.535	1994-10-01	70.960			
1967-01-01	18.612	1995-01-01	71.344			
1967-04-01	18.707	1995-04-01	71.687			
1967-07-01	18.886	1995-07-01	72.040			
1967-10-01	19.096	1995-10-01	72.387			
1968-01-01	19.308	1996-01-01	72.736			
1968-04-01	19.511	1996-04-01	73.037			
1968-07-01	19.703	1996-07-01	73.276			
1968-10-01	19.981	1996-10-01	73.668			
1969-01-01	20.187	1997-01-01	74.107			
1969-04-01	20.444	1997-04-01	74.257			
1969-07-01	20.731	1997-07-01	74.579			
1969-10-01	20.998	1997-10-01	74.824			
1970-01-01	21.294	1998-01-01	74.933			
1970-04-01	21.591	1998-04-01	75.110			
1970-07-01	21.768	1998-07-01	75.433			
1970-10-01	22.056	1998-10-01	75.641			
1971-01-01	22.391	1999-01-01	75.926			
1971-04-01	22.685	1999-04-01	76.201			
1971-07-01	22.916	1999-07-01	76.462			
1971-10-01	23.107	1999-10-01	76.873			
1972-01-01	23.458	2000-01-01	77.396			
1972-04-01	23.604	2000-04-01	77.865			
1972-07-01	23.830	2000-07-01	78.309			
1972-10-01	24.134	2000-10-01	78.723			
1973-01-01	24.412	2001-01-01	79.204			
1973-04-01	24.787	2001-04-01	79.683			
1973-07-01	25.270	2001-07-01	80.004			
1973-10-01	25.773	2001-10-01	80.268			
1974-01-01	26.260	2002-01-01	80.533			
1974-04-01	26.880	2002-04-01	80.821			
1974-07-01	27.668	2002-07-01	81.194			
1974-10-01	28.482	2002-10-01	81.654			