Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

ADAPTATION FUND

CONCEPT NOTE PROPOSAL FOR SINGLE COUNTRY

PART I: PROJECT/PROGRAMME INFORMATION

Title of Project/Programme: R4R-02: Resilient Food Island - Enhancing Local Adaptive Capacity of Andros Island for Climate-Resilient and Sustainable Food Systems

Country: The Bahamas

Thematic Focal Area: Multi Sector (Food Security, Agriculture, Coastal Zone Management, Ecosystem-based Adaptation, Rural Development)

Type of Implementing Entity: Regional Implementing Entity

Implementing Entity: Corporación Andina de Fomento (CAF)

Executing Entities: The Climate Change and Environmental Advisory Unit (CCEAU)

Amount of Financing Requested: 15,000,000 (in U.S Dollars Equivalent)

Project Formulation Grant Request (available to NIEs only): Yes ☐ No ☒

Amount of Requested financing for PFG: N/A (in U.S Dollars Equivalent)

Letter of Endorsement (LOE) signed: Yes ☒ No ☐

NOTE: LOEs should be signed by the Designated Authority (DA). The signatory DA must be on file with the Adaptation Fund. To find the DA currently on file check this page: https://www.adaptation-fund.org/apply-funding/designated-authorities

Stage of Submission:

☒ This concept has been submitted before

☐ This is the first submission ever of the concept proposal

In case of a resubmission, please indicate the last submission date: Click or tap to enter a date.

Please note that concept note documents should not exceed 50 pages, including annexes

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

Table of Contents

PART I: PROJECT/PROGRAMME INFORMATION 1
ACRONYMS 3
PROJECT/PROGRAMME BACKGROUND AND CONTEXT: 4
SUMMARY 4
SOCIAL, ENVIRONMENTAL AND ECONOMIC CONTEXT 4
PROJECTED CLIMATE HAZARDS 10
OBSERVED IMPACTS 10
PROJECTED IMPACTS 12
VULNERABILITY 13
NON CLIMATE DRIVERS 14
BARRIERS TO ADAPTATION 14
PROJECT/PROGRAMME OBJECTIVES: 15
PROJECT/PROGRAMME COMPONENTS AND FINANCING: 15
PROJECTED CALENDAR: 16
PART II: PROJECT / PROGRAMME JUSTIFICATION 16
A. DESCRIBE THE PROJECT/PROGRAMME COMPONENTS, PARTICULARLY FOCUSING ON THE CONCRETE ADAPTATION ACTIVITIES OF THE PROJECT, AND HOW THESE ACTIVITIES CONTRIBUTE TO CLIMATE RESILIENCE. FOR THE CASE OF A PROGRAMME, SHOW HOW THE COMBINATION OF INDIVIDUAL PROJECTS WILL CONTRIBUTE TO THE OVERALL INCREASE IN RESILIENCE. 16
B. DESCRIBE HOW THE PROJECT/PROGRAMME PROVIDES ECONOMIC, SOCIAL AND ENVIRONMENTAL BENEFITS, WITH PARTICULAR REFERENCE TO THE MOST VULNERABLE COMMUNITIES, AND VULNERABLE GROUPS WITHIN COMMUNITIES, INCLUDING GENDER CONSIDERATIONS. DESCRIBE HOW THE PROJECT/PROGRAMME WILL AVOID OR MITIGATE NEGATIVE IMPACTS, IN COMPLIANCE WITH THE ENVIRONMENTAL AND SOCIAL POLICY AND GENDER POLICY OF THE ADAPTATIONFUND. 27
C. DESCRIBE OR PROVIDE AN ANALYSIS OF THE COST-EFFECTIVENESS OF THE PROPOSED PROJECT/PROGRAMME 29
D. DESCRIBE HOW THE PROJECT/PROGRAMME IS CONSISTENT WITH NATIONAL OR SUB-NATIONAL SUSTAINABLE DEVELOPMENT STRATEGIES, INCLUDING, WHERE APPROPRIATE, NATIONAL ADAPTATION PLAN (NAP), NATIONAL OR SUB-NATIONAL DEVELOPMENT PLANS, POVERTY REDUCTION STRATEGIES, NATIONAL COMMUNICATIONS, OR NATIONAL ADAPTATION PROGRAMS OF ACTION, OR OTHER RELEVANT INSTRUMENTS, WHERE THEY EXIST 34
E. DESCRIBE HOW THE PROJECT/PROGRAMME MEETS RELEVANT NATIONAL TECHNICAL STANDARDS, WHERE APPLICABLE, SUCH AS STANDARDS FOR ENVIRONMENTAL ASSESSMENT, BUILDING CODES, ETC., AND COMPLIES WITH THE ENVIRONMENTAL AND SOCIAL POLICY OF THE ADAPTATIONFUND. 34
F. DESCRIBE IF THERE IS DUPLICATION OF PROJECT/PROGRAMME WITH OTHER FUNDING SOURCES, IF ANY. 37
G. IF APPLICABLE, DESCRIBE THE LEARNING AND KNOWLEDGE MANAGEMENT COMPONENT TO CAPTURE AND DISSEMINATE LESSONS LEARNED. 39
H. DESCRIBE THE CONSULTATIVE PROCESS, INCLUDING THE LIST OF STAKEHOLDERS CONSULTED, UNDERTAKEN DURING PROJECT PREPARATION, WITH PARTICULAR REFERENCE TO VULNERABLE GROUPS, INCLUDING GENDER CONSIDERATIONS, IN COMPLIANCE WITH THE ENVIRONMENTAL AND SOCIAL POLICY AND GENDER POLICY OF THE ADAPTATION FUND. 40
I. PROVIDE JUSTIFICATION FOR FUNDING REQUESTED, FOCUSING ON THE FULL COST OF ADAPTATION REASONING. 42
J. DESCRIBE HOW THE SUSTAINABILITY OF THE PROJECT/PROGRAMME OUTCOMES HAS BEEN TAKEN INTO ACCOUNT WHEN DESIGNING THE PROJECT/PROGRAMME. 43
K. PROVIDE AN OVERVIEW OF THE ENVIRONMENTAL AND SOCIAL IMPACTS AND RISKS IDENTIFIED AS BEING RELEVANT TO THE PROJECT/PROGRAMME. 44
PART III: IMPLEMENTATION ARRANGEMENTS 47
A. DEMONSTRATE HOW THE PROJECT/PROGRAMME ALIGNS WITH THE RESULTS FRAMEWORK OF THE ADAPTATION FUND 47
PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY 48
ANNEX I: INITIAL GENDER ASSESSMENT (V.2) 50

List of Tables

Table 1. Project/Programme Components and Financing *16*
Table 2. Projected Calendar *16*
Table 3. Analysis of the measures of Components 2 and 3 ..... *30*
Table 4. Applicable regulations for all activities, measures to ensure compliance and competent authority *35*
Table 5. Projects considered to avoid duplication and ensure complementarity *37*
Table 6. Stakeholders consulted during the Concept Note preparation stage. *41*
Table 7. Environmental and social screening *45*
Table 8. Project alignment with the Results Framework of the Adaptation Fund *47*

List of Figures

Figure 1. Map of the Bahamas *4*
Figure 2. General view of Andros Island *4*
Figure 3. Key government stakeholders involved in the project and relevant to the project *8*
Figure 4. Theory of Change *17*
Figure 5. Sea Level Rise projections for the SSP8.5 current - Source: Smith Werner Intl. 2022 ..... *19*
Figure 6. Existing BAIC Packing House observed during the May 2026 field mission (left), and location map highlighting its central access for farmers across Andros (right). *19*
Figure 7. Storm Surge Hazard Map for Lowe Sound – Baseline Scenario 50 yr return period - Source: Smith Warner Intl. 2022 ..... *21*
Figure 8. Tidal Creek and wetland system at Lowe Sound, North Andros - Source: Google Earth satellite imagery *22*
Figure 9. Sketch of approximate location and typical cross-section of the mangrove islets Source: Smith Warner International Limited, 2022 *23*

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

Acronyms

AF	Adaptation Fund
AFP	Associated Farmers Programme
ANCAT	Andros Conservancy and Trust
AR6	Sixth Assessment Report
B2B	Business-to-Business
BAIC	Bahamas Agricultural and Industrial Corporation
BAHFSA	Bahamas Agricultural Health and Food Safety Authority
BAMSI	Bahamas Agriculture and Marine Science Institute
BAU	Business as Usual
BDB	Bahamas Development Bank
BNSI	Bahamas National Statistical Institute
BNT	Bahamas National Trust
BTVI	Bahamas Technical and Vocational Institute
CAF	Development Bank of Latin America and the Caribbean
CAPEX	Capital Expenditure
CARDI	Caribbean Agricultural Research and Development Institute
CCEAU	Climate Change and Environmental Advisory Unit
CEDAW	Convention on the Elimination of All Forms of Discrimination against Women
CFAN	Climate Finance Access Network
CCI	Caribbean Challenge Initiative
CN	Concept Note
CRVA	Climate Risk and Vulnerability Assessment
CSA	Climate-Smart Agriculture
CSAAF	Climate-Smart Agriculture, Aquaculture and Fisheries
DA	Designated Authority
DEHS	Department of Environmental Health Services
DEPP	Department of Environmental Planning and Protection
DMR	Department of Marine Resources
DoA	Department of Agriculture
E&S	Environmental and Social
ECLAC	Economic Commission for Latin America and the Caribbean
EE	Executing Entity
ENSO	El Niño–Southern Oscillation
ESMP	Environmental and Social Management Plan
ESP	Environmental and Social Policy
FAO	Food and Agriculture Organization of the United Nations
FDI	Foreign Direct Investment
FISMIS	Fisheries Management Information System
FP	Full Proposal
GAP	Gender Action Plan
GBV	gender-based violence
GCF	Green Climate Fund
GCM	Global Circulation Model
GDP	Gross Domestic Product
GEF	Global Environment Facility
GESI	Gender Equality and Social Inclusion
GHG	Greenhouse Gas
GIS	Geographic Information System
GIIP	Good International Industry Practice
HACCP	Hazard Analysis and Critical Control Point
HDI	Human Development Index
HLCPC	High-Level Climate Policy Committee
HNAP	Health National Adaptation Plan
ICZM	Integrated Coastal Zone Management
IDB	Inter-American Development Bank
IICA	Instituto Interamericano de Cooperación para la Agricultura
ILO	International Labour Organization
IMF	International Monetary Fund
IPCC	Intergovernmental Panel on Climate Change
IUU	Illegal, Unreported and Unregulated
KBA	Key Biodiversity Area
LiDAR	Light Detection and Ranging
MAMR	Ministry of Agriculture and Marine Resources
MCS	Monitoring, Control and Surveillance
MEL	Monitoring, Evaluation and Learning
MENR	Ministry of Environment and Natural Resources
MOWFIA	Ministry of Works and Family Island Affairs
MPA	Marine Protected Area
MRV	Measurement, Reporting and Verification
MSME	Micro, Small and Medium-Sized Enterprise
NAP	National Adaptation Plan
NbS	Nature-Based Solutions
NCD	Non-Communicable Disease
NDC	Nationally Determined Contribution
NEAPIS	National Environmental and Agricultural Performance Information System
NFWF	National Fish and Wildlife Foundation
NGO	Non-Governmental Organization
NOAA	National Oceanic and Atmospheric Administration
O&M	Operation and Maintenance
OPM	Office of the Prime Minister
PEC	Project Execution Cost
PFG	Project Formulation Grant
PIU	Project Implementation Unit
PMU	Project Management Unit
PPP	Public-Private Partnership
PSMA	Port State Measures Agreement
PWD	Person with Disability
R4R	Race for Resilience
RCP	Representative Concentration Pathway
SAHMA	South Andros Handicraft and Manufacturing Association
SDG	Sustainable Development Goal
SEAH	Sexual Exploitation, Abuse and Harassment
SIDS	Small Island Developing State
SPEI	Standardized Precipitation Evapotranspiration Index
SLR	Sea-Level Rise
SPMF	Solar-Powered Agro-Fishery Processing and Market Facility
SSP	Shared Socioeconomic Pathway
SST	Sea Surface Temperature
TNC	The Nature Conservancy
UB	University of The Bahamas
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNFCCC	United Nations Framework Convention on Climate Change
URCA	Utilities Regulation and Competition Authority
USD	United States Dollar
USP	Unidentified Sub-Project
WFP	World Food Programme
WMO	World Meteorological Organization
WSC	Water and Sewerage Corporation

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

Project/Programme Background and Context:

Summary

1. The Bahamian food system is highly exposed to climate change and structurally vulnerable to external shocks. Hurricanes, flooding, sea-level rise, saline intrusion, heat stress and transport disruptions repeatedly damage farms, fisheries, coastal ecosystems and critical post-harvest infrastructure, magnifying losses and delaying recovery. In a country that imports over 90 percent of its food, these disruptions translate into higher food prices, supply gaps, reduced access to nutritious food, and declining rural livelihoods. This dependence on food imports also creates structural vulnerabilities in terms of food availability, access and stability under external shocks. This is particularly relevant for Small Island Developing States (SIDS), where exposure to external shocks and climate-related disruptions can quickly translate into food insecurity. Andros Island is a strategic adaptation priority: it concentrates major agricultural land, freshwater resources, fisheries and coastal ecosystems essential for national food security, while remaining highly exposed to climate risks and constrained by fragmented value chains and limited resilient infrastructure.
2. The project is conceived as a flagship intervention under the Government of The Bahamas' Race for Resilience (R4R) Program, designed to transform the Family Islands into more resilient, abundant and competitive ecozones. By piloting an integrated adaptation model in Andros, the project combines: **(i) climate-informed food system planning and knowledge management; (ii) resilient green and grey infrastructure** for farmers and fisheries, including productive, storage, processing, market and coastal resilience measures; **and (iii) support services for farmers, fishers and value chain actors** to strengthen climate-resilient practices, innovation, value addition and market access. These components address the full adaptation pathway, covering from evidence and planning, resilient infrastructure and ecosystem services, while strengthening producer capacities and positioning Andros as a **scalable model for climate-resilient food systems** across The Bahamas.

Social, Environmental and Economic Context

Geography and Land Area

3. The Commonwealth of The Bahamas is a SIDS with a total land area of approximately 5,382 mi² (13,943 km²), spread across an archipelago of more than 700 islands and cays (of which only 30 are inhabited). Situated in the western Atlantic Ocean, the country extends across approximately 100,000 mi² (258,999 km²) of ocean. Its geography is characterized by low relief and generally flat terrain, with approximately 80% of the land lying less than 1.5 meters above sea level[1], increasing national exposure to sea-level rise, storm surge, coastal flooding, coastal erosion, saltwater intrusion and hurricane-related impacts.

Figure 1. Map of the Bahamas



Figure 2. General view of Andros Island



Source: Figure 1: Government of The Bahamas. (n.d.). Overview of The Bahamas. *Retrieved September 5, 2025, from* https://www.bahamas.gov.bs/overview-of-the-bahamas; Figure 2: Government of The Bahamas. (2017). *Andros Master Plan*. Nassau, Bahamas.

4. The Bahamas is geographically organized into New Providence and the Family Islands. New Providence, at only 80 mi² (207 km²), is small in land area but centrally positioned and nationally significant as the country's main population, economic, and administrative hub. This archipelagic configuration (Fig. 1) creates structural challenges for service delivery, infrastructure development, inter-island logistics, and disaster response.
5. Within this national geography, Andros Island is distinct (see Fig. 2). Located approximately 45 km west of Nassau, Andros covers about 2,300 mi² (5,957 km²), representing approximately 43% of the national land mass and making it the largest island in The Bahamas. Politically treated as one island, Andros is physically composed of three main landmasses and four districts: North Andros, Central Andros, Mangrove Cay, and South Andros. These areas are separated by tidal creeks, wetlands, bights, and blue holes, creating an "archipelago within the archipelago" and limiting internal connectivity between northern, central, and southern districts.
6. Andros' geography is central to the country's food security and climate resilience agenda. The island contains the largest freshwater resources in The Bahamas and the nation's largest concentration of arable land at 134,000 acres, representing 55% nationally; additionally, it contains extensive pine and coppice forests, mangroves, wetlands, tidal creeks, seagrass beds, sand flats, and blue holes, and is bordered by the world's third-largest barrier reef and the deep Tongue of the Ocean. These features support agriculture, fisheries, nature-based tourism, freshwater supply, and natural coastal protection, while also making Andros a strategic location for

[1] CCEAU. (2025, October). The Bahamas' NDC 3.0. Office of the Prime Minister.

piloting integrated, climate-resilient food systems and ecosystem-based adaptation. Due to its land area and freshwater resources, Andros has been identified as having the potential to supply up to 40% of agricultural products for its own population and other regions of The Bahamas[2].

Demographics

7. According to the 2022 Population and Housing Census[3], The Bahamas had a population of 398,165 (52% females). The population is highly concentrated in New Providence, which accounts for 74.5% of the national population, while Andros Island accounts for only 1.93% of the national total, with 7,695 inhabitants (50.3% females). Despite being the largest island in the country, Andros remains sparsely populated, with a population density of only 3.3 persons per square mile, compared to the national average of 74 persons per square mile. Andros has experienced population decline or stagnation over several decades, with internal migration toward New Providence and other economic centers linked to employment and education opportunities. Between 2000 and 2022, Andros recorded a net internal migration loss, with more people moving out of the island than moving in.
8. Within Andros, population distribution is uneven: North Andros concentrates 52.3% of the island's population. With settlements distributed across town areas and rural settlements, several populated settlements, productive areas, and transport links are in low-lying coastal zones or along key road corridors that connect communities to markets, public services, and emergency support[4].
9. The national population structure reflects a median age of 33 years, with 22.5% of the population under 15 years of age and almost 7% aged 65 years and older. In Andros, 25% of the population is under 15 years of age and 9% is 65 years of age or older.
10. At the national level, educational attainment among adults aged 15 years and above shows steady progress nationally, with 68.4% completing secondary education and 21.1% attaining college-level education. Meanwhile, only 1.2% of the population had no formal education and 2% had only primary education.
11. UNDP Human Development Report data[5] classify The Bahamas as a very high human development country, with a 2023 Human Development Index (HDI) of 0.820 and a rank of 66. However, the inequality-adjusted HDI falls to 0.670, indicating that national averages mask important inequalities in the distribution of health, education, and income outcomes. This is relevant for Andros, where remoteness, low population density, and limited local services can constrain adaptive capacity even within a high-income national context.
12. Life expectancy at birth was 74.6 years in 2023 according to UNDP Human Development Report data, with higher life expectancy for women (78) than men (71). The same source shows a Gender Development Index of 1.015 in 2023, but persistent gender-related disparities remain, including lower estimated gross national income per capita for women than for men.
13. In terms of household composition, the 2022 Census[6] enumerated 2,723 households in Andros, equivalent to 2.3% of all households nationally. The average household size in Andros was 2.83 people, below the national average of 3.34 people.
14. Housing and access to basic services also shape household-level adaptive capacity in Andros. Of the 2,723 occupied dwellings in Andros, 90.8% had access to electricity, compared to 97.4% nationally, and 60 dwellings reported solar power. Regarding water sources, 56.4% had public piped water into the dwelling, 22.1% had private piped water into the dwelling, and 15.2% relied on private water not piped, compared to 61%, 30.2%, and 2.9% nationally, respectively. While 94.4% of occupied dwellings in Andros used septic tanks, there was no sewerage system on the island. In terms of construction materials, 61.2% of dwellings were built of concrete, 20.6% of wood, and 11.5% of a combination of concrete and wood.[7]

Main Economic Activities and Livelihoods

15. In 2024, The Bahamas recorded a nominal Gross Domestic Product (GDP) of approximately $15.8 billion. New Providence accounted for the largest share, with 74.2% of GDP, equivalent to $11.7 billion, while the Family Islands accounted for 25.8%, equivalent to $4.1 billion[8]. In the same year, Andros recorded a nominal GDP of $124.8 million, representing only 0.8% of The Bahamas' total GDP and approximately 3% of the Family Islands' GDP[9]. National GDP per capita was approximately $39,455 in 2024[10], while GDP per capita in Andros was estimated at about $16,600, highlighting the extreme income inequality in the country. Income distribution varies considerably between the urban communities of New Providence and Grand Bahama and the rural communities of the Family Islands, where subsistence fishing and farming are still widely practiced[11].
16. The structure of the Bahamian economy is strongly service-oriented, with tourism as the main economic activity, source of revenue and employment. Tertiary activities account for more than 80% of GDP, while primary sectors such as agriculture, forestry, and fishing account for a very small share of national output, representing less than 0.5% of GDP ($81.5 million)[12]. This economic structure is closely linked to The Bahamas' food import dependence, as the country imports approximately 90% of the food consumed domestically[13]. This exposes households, food businesses, and Family Island communities to external price volatility, supply-chain disruptions, and post-disaster logistics constraints. **It also has implications for nutrition and health, as foods imported** are mostly processed and high in salt, trans fats and sugar, resulting increasingly in obesity and non-communicable diseases (NCD). The high and persistent burden of NCDs account for the majority of morbidity, mortality, and health service demand[14]. Thus, food and nutritional security issues in the country are largely related to the capacity of people obtaining access to, and consuming, diverse nutritious foods that are needed for maintaining a healthy lifestyle[15]. Agriculture and fisheries play a major role in creating wealth and promoting sustainable and resilient food systems.
17. **Agriculture** is constrained by the country's geography and natural resource endowments. Less than 1% of land is arable, with shallow soils, freshwater scarcity, and fragmented plots across the archipelago. Andros, Abaco, and New Providence contain the majority of productive land. The agriculture sector employs less than 3% of The Bahamas labor force[16]. Farming is predominantly smallholder-

[2] Office of the Prime Minister. (2017, February). *Sustainable Development Master Plan for Andros Island*.
[3] Bahamas National Statistical Institute. (2022) *Census of population and housing: First Release.*
[4] OPM (2017). Andros Master Plan.
[5] UNDP. (n.d.). Bahamas: Country Data. Data Futures Exchange
[6] Bahamas National Statistical Institute. (2022) *Census of population and housing: Second Release.*
[7] Ibid.
[8] Bahamas National Statistical Institute. (2025a). *Gross domestic product by island: 2015 to 2024.*
[9] BNSI. (2024, July). *Annual gross domestic product of The Bahamas, 2015–2023: Production and expenditure approaches.*
[10] World Bank. (2024). *GDP per capita (current US$) – The Bahamas. World Development Indicators.*
[11] Le Groupe-conseil Baastel. (2023, December 15). *Climate risk and vulnerability assessment for coastal ecosystems and communities of The Bahamas: Final report.* Prepared for the Government of The Bahamas and the Green Climate Fund.
[12] BNSI. (2025b). *Press release: Advance estimates for Gross Domestic Product 2024.*
[13] OPM. (2017). Andros Master Plan.
[14] The Bahamas Ministry of Health and Wellness (2025). *The Bahamas National Health Strategy (2026-2030).*
[15] Government of The Bahamas. (2021). *The Bahamas National Pathway for Food Systems.*
[16] Statista. (n.d.). Employment by Economic Sector in The Bahamas.

based, characterized by limited economies of scale and low levels of mechanization. As a result, the sector often plays a more significant role in supporting household food security than as a primary source of income. For many low-income households, the cultivation and consumption of locally produced food serve as an important safety net, helping to reduce reliance on imported food and manage the cost of food consumption. Agricultural production remains largely dependent on rainfall, making farming systems particularly vulnerable to prolonged drought conditions.[17]

18. Despite these constraints, agriculture and agro-processing offer strategic opportunities for strengthening food security and resilience, particularly in the context of high food import dependence. The Bahamas Climate Resilient Agriculture: Policies, Strategies and Actions report, identifies a nascent value-added industry, where agro-processing offers opportunities for strengthening food security, as expanding local value-added production could contribute to improving food system resilience and reducing vulnerability to external shocks. Main crops include onions, tomatoes, cabbages, citrus, bananas, cassava, and sweet potatoes, while poultry and pork dominate livestock production. However, the sector continues to face constraints related to value chain coordination, post-harvest and storage infrastructure, technical and extension support, food safety requirements, and the adoption of sustainable and climate-resilient production practices.
19. The **fisheries sector** plays an important role in the Bahamian economy in terms of foreign currency earnings, food supply and employment. The fisheries are led by the spiny lobster industry, which represents more than half of total landings and nearly 90% of export value, complemented by Queen conch and Nassau grouper. The commercial fisheries sector supplies 31 kg/capita/year of fish and fishery products to the population, generates some US$80 million annually in export earnings and provides full-time employment to 9,300 commercial fishers and thousands of additional jobs in recreational fisheries, vessel maintenance, fish processing, retail and trade. The fishing fleet is characterized as small-scale and counts approximately 4,000 fishing vessels ranging in length from 3 meters to 30 meters, but generally less than 7 meters in length. Fisheries production data is limited, as it is largely based on landing sites, which may not fully capture the geographic origin of catches or reflect the true distribution of fishing effort.[18]
20. In Andros, agriculture, fishing and forestry, combined with wholesale and retail trade, motor vehicle repairs, and transport and storage, contributed approximately $14.2 million in 2023, equivalent to about 12% of the island's GDP[19]. Although this contribution appears modest in GDP terms, these sectors are central to local livelihoods, food access, and the island's role in national food system resilience. Commercial fishing, including crabbing and sponging, has historically been one of the most important income-generating activities for Androsians. Fisheries and marine-based livelihoods are centered on spiny lobster/crawfish, queen conch, Nassau grouper, snappers, crabs, stone crab, sponge, and, increasingly, other marine species such as sea cucumber.[20]
21. Agriculture is also strategically relevant: Andros contains a major share of The Bahamas' farmland and, due to its land area and freshwater resources, has long been identified as having significant potential to expand domestic food production and reduce dependence on imports. Agricultural production in Andros is diverse including watermelon, peppers, onions, tomatoes, sweet potatoes, pumpkin, herbs, soursop, bananas/plantains, okra, eggplant, cassava, coconut, jackfruit, breadfruit, sugar apple, plums, mangoes, sorrel, sugar cane, cucumber, cabbage, thyme, rosemary and basil, alongside poultry and pork production. This diversity reflects the island's potential for local food production but also points to the need for strengthened value chains, technical support, and coordination mechanisms to translate this potential into sustained and scalable food system outcomes.
22. Livelihood patterns vary across Andros' districts. North Andros is closely associated with agriculture, fisheries, forestry, Bahamas Agriculture and Marine Science Institute (BAMSI)-related activities, and transport links through Morgan's Bluff and San Andros. Central Andros has important nature-based tourism assets, including blue holes, bonefishing, forest areas, and marine ecosystems, alongside agriculture and fisheries. Mangrove Cay is characterized by fishing, sponge and stone crab value chains, small-scale farming, and eco-tourism linked to reefs, mangroves, blue holes, and West Side National Park. South Andros combines small-scale agriculture, land crab and coconut products, fisheries, nature-based tourism, and potential farm-to-table linkages with lodges, restaurants, and local markets.
23. **Nature-based tourism** is another key livelihood pathway in Andros. The island is internationally recognized for bonefishing, diving, blue holes, mangroves, coral reefs, and protected areas. The Andros Master Plan estimated that nature-based tourism generated approximately USD 44 million in direct revenues and employed more than 400 staff and guides in overnight accommodation, guided fishing, scuba diving, and other eco-tourism activities.

Gender and social inclusion baseline analysis: see Annex 1 – Initial Gender Assessment.

Key ecosystems

24. The Bahamas is characterized by a mosaic of terrestrial, freshwater, coastal and marine ecosystems that form the ecological foundation of the archipelago. Terrestrial systems include pine forests, coppice woodlands, inland wetlands and coastal vegetation, while freshwater resources are limited and largely confined to fragile aquifers, freshwater lenses, blue holes, ponds, marshes and tidal creeks. Coastal and marine ecosystems—including seagrass meadows, coral reefs, mangroves, tidal flats, beaches and coastal wetlands—provide critical services such as fisheries nurseries, buffers against storm surge and erosion, tourism assets and globally significant carbon sinks.[21]
25. Andros Island contains the most extensive and varied ecosystems in The Bahamas, including coppice forests, palm shrublands, sawgrass, beaches, rocky shores, mangroves, seagrass beds, tidal creeks and wetlands. It retains some of the country's most intact natural areas, is one of the most extensive wetland systems in the Caribbean and contains the largest freshwater resources in The Bahamas. In North Andros, the freshwater lens represents the principal natural freshwater source for the country, with three main wellfields extending from Red Bays to Conch Sound and producing millions of gallons per day, equivalent to approximately 70% of the national groundwater source. Nearly half of North Andros is covered by aquatic systems, including mangroves and wetlands, inland surface water, coastal lagoons and blue holes.[22] This scale of freshwater abundance stands in sharp contrast to the rest of The Bahamas, where freshwater is scarce and most islands depend on costly desalination or imported supply.
26. Andros' coastal and marine ecosystems are central to food security, livelihoods and resilience. The island is bordered by the world's third-largest barrier reef, extending more than 140 miles along its eastern shore, and surrounded by over 1,300 square miles of tidal flats, creeks and wetlands. These habitats sustain conch, lobster, crab, sponge, finfish and bonefish populations, supporting commercial fisheries, sport fishing and nature-based livelihoods. Blue holes are especially concentrated in North Andros, with more

[17] BAIC. (2022). Stakeholder consultation, as cited in Dormer, D. (2022), The Bahamas Climate Resilient Agriculture: Policies, Strategies, and Actions. IICA.
[18] Government of The Bahamas. (2024, March). *Third National Communication to the UNFCCC*.
[19] BNSI. (2024, July). *Annual gross domestic product of The Bahamas, 2015–2023: Production and expenditure approaches.*
[20] OPM. (2017, February). Andros Master Plan.
[21] Le Groupe-conseil Baastel. (2023, December 15). *Climate risk and vulnerability assessment for coastal ecosystems and communities of The Bahamas: Final report.* Prepared for the Government of The Bahamas and the Green Climate Fund.
[22] IDB. (2022). *North Andros Urban Land Use Plan Pilot Project* [Draft pilot]

than 118 recorded, while the West Side National Park protects one of the country's most productive nursery areas for conch and fish stocks, as well as prime bonefish habitat[23].

27. Andros holds 56% of The Bahamas' total mangrove acreage, making it the highest density of mangrove ecosystems in the Western Hemisphere. Over 57% are dwarf mangroves, stunted by high salinity and rocky soils.[24] Mangroves face threats from coastal development, hurricanes, pollution, and habitat fragmentation, which reduce fish nursery habitat, biodiversity, and coastal resilience. Key ecosystem services include coastal erosion and flood protection, carbon sequestration, and habitat for birds and commercially important fish species.
28. Mangroves, seagrass beds, coral reefs, and coastal coppice forests currently buffer over 55% of the populated east coast of Andros, protecting communities and infrastructure from storm surge and erosion.[25] The mix of marine, freshwater, and terrestrial environments supports rich biodiversity and serves as critical nursery and foraging habitat for high-value species such as snapper, spiny lobster, tarpon, and bonefish, significantly contributing to fish stocks across the Caribbean, including for migratory and endangered species. Fish biomass in mangrove creeks is exceptionally high due to their natural productivity, and the banks west of Andros constitute one of The Bahamas' most important spiny lobster fishing grounds[26].
29. The island also contains nationally significant forest ecosystems. Andros includes pine, mangrove, and coppice forests, and contains approximately 55% of the country's pine forest[27]. More than one million acres of forest areas have been identified for some level of protection, including forest reserves, protected forests, conservation forests and national park areas. These forests provide habitat, water regulation, carbon storage, erosion control and opportunities for sustainable timber and non-timber forest products, while supporting the ecological integrity of freshwater and coastal systems.
30. Protected areas are a central part of Andros' ecological infrastructure. The Andros National Parks and Protected Areas span approximately 1.55 million acres of land and sea, including West Side National Park, North and South Marine Parks, Blue Holes National Park, the Crab Replenishment Reserve, Andros Barrier Reef National Park and Joulters Cays National Park. These areas protect blue holes, coppice, pinelands, freshwater lenses, land crab habitat, mangrove flats, reefs and fisheries nurseries, reinforcing Andros' role as a national reservoir of biodiversity, fisheries productivity, freshwater security and nature-based livelihoods.[28] The Bahamas has commitments (under an IDB Project) to develop climate-smart management plans for the main Marine Protected Area (MPA) and the completion of a national Mangrove Management Plan to protect vital habitats like coral reefs, seagrass meadows and mangrove forests[29], which is consistent with the Bahamas National Trust Strategic Plan (2024-2029)[30].
31. In addition, eight Key Biodiversity Areas (KBAs) have been identified in Andros. These KBAs encompass a mosaic of habitats, including marine and terrestrial ecosystems, coastal and supratidal zones, mangroves, forest and shrublands. The KBAs include South Andros Island, Joulter Kays, Andros Blue Holes National Park, Driggs Hill to Mars Bay, Stafford Creek to Andros Town, Mangrove Cay, Red Bays and Owenstone. Some of these KBAs have been designated as protected areas at national level[31]. These areas are of international significance as they meet one or more of the established global criteria and thresholds including important Bird and Biodiversity Areas, Alliance for Zero Extinction sites, and Key Biodiversity Areas).

Governance in the project area

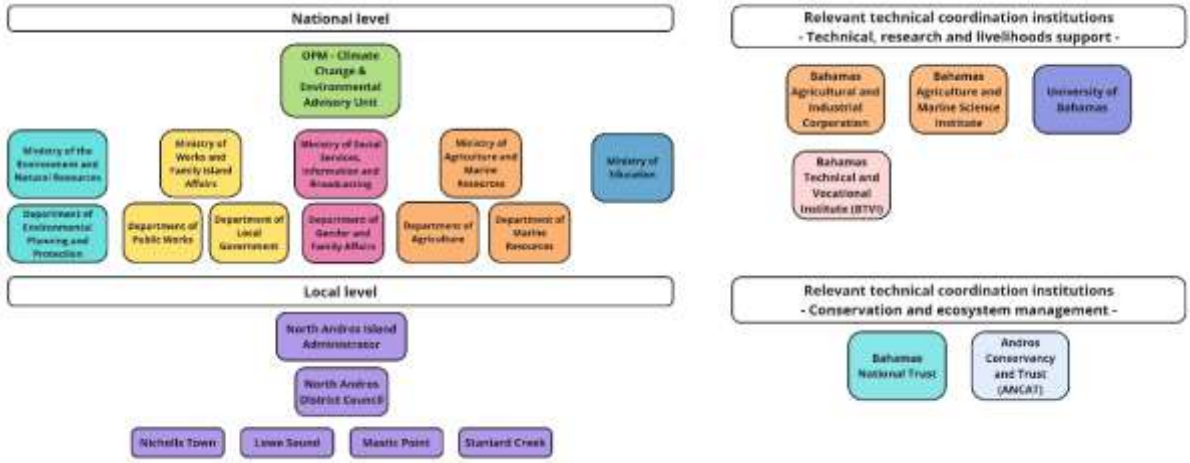
32. The actors identified in this section represent the full range of stakeholders with a relevant mandate or potential role at some point during the project's life cycle. This mapping is not equivalent to the formal implementation arrangements, which will be detailed at Full Proposal (FP) stage. The CCEAU under the Office of the Prime Minister (OPM) will serve as the Executing Entity, while the executing partners — including the Ministry of Agriculture and Marine Resources, the Ministry of Works and Family Island Affairs, and the Bahamas National Trust — have been identified based on their operational mandate and capacity to support project implementation. Other actors referenced in this section, such as the Ministry of Environment and Natural Resources, are identified for their regulatory and policy relevance, and their engagement will be defined in future stages in accordance with their institutional mandate and the specific needs of project activities.
33. In The Bahamas, the **government structure** is organized primarily between the national and local levels. At the national level, the central government comprises the State institutions whose decisions apply across the entire national territory. This level includes the Executive Branch, exercised through the Cabinet, and the various sectoral ministries, which are responsible for formulating and implementing public policies in areas such as finance, health, agriculture, environment, education, public works, and Family Island affairs. The Cabinet has the general direction and control of the Government and coordinates government ministries and departments.
34. The local government system in the Family Islands is mandated under the Local Government Act 1996 and local government policy is being overseen by the Ministry of Works and Family Island Affairs. The local government is structured in terms of districts and town areas. The districts are classified into 2nd Schedule Districts and 3rd Schedule Districts. The 2nd Schedule Districts are further subdivided into towns, while the 3rd Schedule Districts are unitary. The councils and committees perform the local government functions devolved under the Local Government Act. The local government is not empowered to raise revenue itself and funding for all local government expenditure is provided through transfers from the national government.[32] Despite the extent of responsibilities devolved by the Local Government Act to the local government, the activities of the local councils, committees, and boards primarily focus on public procurement contracts necessary for the provision of government services in the islands.
35. For Andros, its local government is comprised of three (3) 2nd Schedule Districts with eight (8) towns and one (1) 3rd Schedule District.
36. Key government stakeholders involved and relevant to the project are shown in Fig. 3.
37. The **Office of the Prime Minister (OPM)**, through the **Climate Change and Environmental Advisory Unit (CCEAU)** leads national coordination on climate change and climate finance. Under its whole-of-government approach, the R4R Program is a country-led, multi-component adaptation program to reduce systemic vulnerability and support risk-informed development across the Family Islands. It will be implemented in phases with ministerial partners and financed through a blended approach combining international funds, concessional finance, grants, PPPs and national resources.

---

[23] OPM. (2017). Andros Master Plan.
[24] Perry Institute for Marine Science. (2022). *Mangrove Report Card for The Bahamas*.
[25] OPM. (2017). Andros Master Plan
[26] Hargreaves-Allen, V. (2010). *An Economic Valuation of the Natural Resources of Andros Islands, Bahamas*. Conservation Strategy Fund. Report prepared for The Nature Conservancy.
[27] IDB. (2022). *North Andros Urban Land Use Plan Pilot Project* [Draft pilot]
[28] OPM. (2017). Andros Master Plan.
[29] IDB. (2024). *The Bahamas Launches Debt-for-Ocean-Conservation Swap with IDB Support.*
[30] BNT. (2025). *Strategic Plan 2024–2029*. https://bnt.bs/wp-content/uploads/2025/08/StrategicPlan-edits_7-14.pdf
[31] Key Biodiversity Areas. (2026). *KBA Map*.
[32] Commonwealth Local Government Forum. (2019). *The Local Government System in The Bahamas: Country Profile 2019*.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

Figure 3. Key government stakeholders involved in the project and relevant to the project



38. The **Ministry of Environment and Natural Resources**, through the Department of Environmental Planning and Protection (DEPP), is responsible for environmental planning, permit issuance and compliance. MENR and DEPP are essential for ensuring that project activities are consistent with national environmental policy, conservation priorities and environmental compliance requirements.
39. The **Ministry of Works and Family Island Affairs** is the key institutional bridge between national government and territorial administration in the Family Islands. Its mandate is directly relevant to public infrastructure, drainage, town and country planning, physical planning, land use and relations with local government authorities, and Family Island Affairs. North Andros has a draft land-use planning document containing a technical diagnosis and proposed zoning, but the plan has not been implemented.
40. The **Ministry of Agriculture and Marine Resources** is highly relevant because agriculture and fisheries are among the priority sectors for climate resilience and livelihood diversification in Andros. Through the Department of Agriculture, the Ministry supports agriculture, food production, agricultural marketing, horticulture, quality control, plant protection, veterinary services, public markets, agricultural lands and relations with The Bahamas Agricultural and Industrial Corporation (BAIC) and BAMSI. The Department of Marine Resources provides the institutional entry point for fisheries, aquaculture, fishing permits and marine conservation.
41. **BAIC and BAMSI** are especially relevant operational partners that can support food security, sustainable production systems, applied research and capacity building for farmers, fishers and young people. BAIC, created in 1981, supports farmers with business plans, research, sourcing funding, business advice, implementation follow-up and land distribution support. BAMSI, created in North Andros in 2014, was established to support agricultural growth, train younger farmers and agricultural officers, introduce new technologies and best management practices, and help farmers produce marketable products. It has agricultural infrastructure, land and technical expertise, and its School of Agriculture and Natural Resources provides hands-on training in crop and livestock production, sustainable farming systems, agroecology, agribusiness, soil and water management, natural resource conservation and climate-smart agricultural practices. BAMSI also operates research and demonstration facilities and provides extension and outreach services intended to deliver practical information, technologies and farmer support, including in North and South Andros. However, further strengthening BAMSI's outreach, research, and advisory functions would be helpful in supporting large-scale agricultural development across Andros, particularly in relation to regular farm-level extension, access to agricultural inputs, and the links between training, farmer services, market access, and climate-resilient production. The **University of The Bahamas** may also serve as a technical or knowledge partner for applied research, data collection and knowledge management.
42. Other relevant national institutions include the **Ministry of Social Services, Information and Broadcasting**, through the Department of Gender and Family Affairs, given the project's focus on inclusive livelihoods, women's participation, youth engagement and equitable access to benefits.
43. The **Ministry of Education and the Bahamas Technical and Vocational Institute (BTVI)** are relevant given the project's emphasis on workforce development, technical training, and long-term capacity building, particularly for designing and accrediting training pathways in agriculture and fisheries. The **Agriculture and Marine Cadet Programme**, operating through local schools, offers an important entry point for engaging youth in agriculture, fisheries, and environmental stewardship, in support of the project's objectives related to youth participation and long-term sector sustainability.
44. Andros has a 2017 **Sustainable Development Master Plan** developed by the OPM with IDB support, providing a strategic framework for sustainable development, including investment priorities, policy guidance, and land and sea zoning. Developed through a participatory process, it identifies climate change, coastal resilience, and livelihoods as key priorities. However, its implementation remains constrained by the country's limited fiscal space.
45. **Key non-governmental actors** contribute to the project across four functional roles: producer and community organizations; value chain and logistics actors; conservation and research organizations; and community-level engagement actors. **Producer and community organizations** include the North Andros Farmer Cooperative, participants of the Associated Farmers Programme and the emerging Women's Farming Association, which collectively represent key entry points for engaging smallholder farmers, women producers, and value-added producers in project activities. The Andros Chamber of Commerce and the South Andros Handicraft and Manufacturing Association (SAHMA) are relevant for their role in entrepreneurship, small-scale manufacturing, value-added production, local branding and market linkages, which may support the economic sustainability of climate-resilient food systems. In the fisheries sector, fishers are a key stakeholder group. While they have limited formal organization, they maintain strong informal networks and established market relationships across Andros and New Providence — an important asset for project implementation, particularly for climate risk communication and adoption of resilient practices. **Value chain and logistics actors** play a critical enabling role given the geographic isolation of Andros and its dependence on inter-island transport. Mail boat operators — notably MV President Taylor and MV Captain Prince, connecting North and Central Andros with New Providence — are relevant stakeholders due to their role in the movement of agricultural and fisheries products and their contribution to food supply chain resilience. **Conservation and research organizations** include the Bahamas National Trust (BNT) which manages key protected areas in Andros, including Blue Holes National Park, the Crab Replenishment Reserve, the North and South Marine Parks, and West Side National Park - and has established capacity in environmental education and community outreach that can support ecosystem-based

approaches under the project. Forfar Field Station, a non-governmental research and education facility hosting local and international researchers, has contributed to knowledge generation on Andros' terrestrial and marine ecosystems and may serve as a valuable knowledge partner for environmental monitoring, research, and outreach activities. Regarding the Andros Conservancy and Trust (ANCAT), while it has historically played an important role in conservation on Andros, its current operational status requires verification before confirming its potential role in project implementation. **Community-level actors**, including community leaders, religious leaders and local development advocates play an important role in mobilizing participation, supporting local ownership, and facilitating sustained community engagement — functions that are critical for the social legitimacy and long-term effectiveness of project interventions.

Observed Climate Hazards

46. The Bahamas is located on the boundary between the tropical and subtropical zones and has a semi-tropical or subtropical marine climate moderated by the warm waters of the Gulf Stream. Its subtropical climate and geographic position between major warm ocean currents influence the archipelago's seasonal variability and the biological communities inhabiting its ocean and coastal areas. The islands experience warm, humid conditions year-round, although with more seasonal variation than the Southern Caribbean islands. Located within the Atlantic hurricane belt, The Bahamas is also exposed to hurricanes and tropical cyclones, particularly from August to November. Interannual climate variability is strongly influenced by the El Niño Southern Oscillation (ENSO), with El Niño episodes generally associated with warmer and drier conditions between June and August.
47. *Temperature*: Average temperatures are high, with mean monthly temperatures generally fluctuating between 21°C and 28°C throughout the year. The northern islands experience temperatures up to 5°C cooler than the southern islands. Peak temperature values occur between June and September, while the coolest temperatures are experienced from December to April.
48. The average temperatures in The Bahamas have shown a steady upward trend since at least the early twentieth century, with the rate of warming accelerating in recent decades. Mean annual temperatures have risen consistently over successive decades, with the sharpest increases occurring during the past two decades.
49. Annual mean temperatures increased by 0.7°C during 1991–2020 compared to the 1961–1990 reference period. Both maximum and minimum temperatures increased, although minimum temperatures experienced larger shifts, ranging from 0.6°C to 1.1°C, compared to 0.4°C to 0.7°C for maximum temperatures. Seasonal variations show that warming has been most pronounced during the cooler months from December through February.[33]
50. The World Bank Knowledge Portal[34] suggests spatial variation across the archipelago, with northeastern islands warming more rapidly than southwestern ones. The occurrence of exceptionally high maximum temperatures defined as values exceeding two standard deviations above monthly averages, has increased markedly since the late 1990s.
51. *Precipitation:* Rainfall is characterized by a wet season from May to October and a dry season from November to April. Mean monthly rainfall varies between approximately 40 mm and 50 mm during the driest months, from December to March, and reaches approximately 190 mm to 214 mm in June, September, and October. Rainfall also varies significantly across the archipelago, with the northwestern islands receiving approximately twice as much rainfall as the southeastern islands. The north and central Bahamas receive on average 1,270 to 1,524 mm of rainfall annually, while the southeastern Bahamas receive approximately 914 mm annually. During the dry season, drought risk increases along a southeastern gradient, as the southern islands already receive about half the rainfall of the northern islands.[35] Within Andros, this north–south gradient is also relevant: North Andros receives about 1524 mm of rainfall per year, while South Andros is drier and receives approximately 1016 mm per year[36].
52. The average rainfall in The Bahamas was approximately 10% higher during 1991–2020 compared to the 1961–1990 reference period. Increases were recorded across all months of the year, with the sharpest rise occurring in April, when precipitation was 43% higher. Substantial increases were also observed in September (18%), November (17%), and March (16%), indicating a shift toward wetter conditions during key months of the year and contributing to more variable and less predictable rainfall patterns.
53. *Rapid onset climate hazards*: The hurricane season in the North Atlantic spans June to November. The Bahamas is regularly affected by tropical cyclones, including high-category hurricanes such as Joaquin (2015), Matthew (2016), Irma (2017), and Dorian (2019). These events are associated with strong winds, storm surge and extreme rainfall. Tornadoes, heavy squalls and waterspouts associated with tropical systems also pose localized threats.
54. The Bahamas has historically been hit by a hurricane every 3 years, and major hurricanes (Category 3, 4 or 5) every 12 years. Since 2000 major hurricanes have hit the islands every 3 years, bringing extreme rainfall, high winds and storm surges (typically 5m maximum height, but recorded up to 7m height).[37]
55. Between 2015 and 2019, The Bahamas was struck by a sequence of major hurricanes. These storms were not only high-magnitude events but also included atypical or compounding characteristics, such as slow movement or stalling over islands, prolonged rainfall, and record-breaking storm surges.[38]
56. For Andros specifically, 165 hurricanes and tropical storms passed within 300 km of Andros between 1851 and 2022; 43% of these storms were classified as hurricanes and 20% as major hurricanes, and the last two decades have been particularly active, with 25 storms passing within the area of influence since 2004.[39]
57. The El Niño-Southern Oscillation phenomenon plays a significant role in modifying hurricane activity in the North Atlantic from year to year. El Niño contributes to fewer Atlantic hurricanes while La Niña contributes to more Atlantic hurricanes.[40]
58. *Sea-level Rise (SLR):* Global mean sea level from tide gauges and altimetry increased from 1.4mm/year over the period 1901–1990 to 2.1mm/year over the period 1970–2015 to 3.25mm/year over the period 1993–2018 to 3.6mm/year over the period 2006–2015. The sea levels in The Bahamas have increased by about 0.3 meters over the past century, with annual anomalies rising sharply and reaching +122 mm in 2015 relative to the 1993–2012 mean.
59. The Caribbean Sea level is highly correlated with ENSO especially since the mid-1980s, with larger increases in sea levels occurring during stronger ENSO events. Studies have shown a significant correlation between the interannual variability in sea level and

[33] Le Groupe-conseil Baastel. (2023). Climate Risk and Vulnerability Assessment for The Bahamas.
[34] World Bank. (n.d.). *Climate Change Knowledge Portal*.
[35] Le Groupe-conseil Baastel. (2023). Climate Risk and Vulnerability Assessment for The Bahamas.
[36] OPM. (2017). Andros Master Plan.
[37] Green Climate Fund. (2026, March 4). *Funding proposal package for FP298: Climate Resilience of the Water Sector in The Bahamas* (GCF/B.44/02/Add.14).
[38] Le Groupe-conseil Baastel (2023). Climate Risk and Vulnerability Assessment for The Bahamas.
[39] Smith Warner International Limited. (2022, October 12). Socioeconomic and biophysical assessments: Baseline studies for hazard resilience of natural infrastructure in Andros, The Bahamas. Prepared under the Climate-Resilient Coastal Management & Infrastructure Program (BH-L1043).
[40] Smith Warner International Limited. (2022, July 21). Climate change, met-ocean, and coastal analyses: Baseline studies for hazard resilience of natural infrastructure in Andros, The Bahamas. Prepared under the Climate-Resilient Coastal Management & Infrastructure Program (BH-L1043).

hurricane activity. This is especially true for the post 2000 period, during which hurricane intensity and sea level interannual variability have both increased.[41]

60. *Sea Surface Temperature*: The NOAA data indicate that over the period 1861 to 2100 of the Andros region, SSTs have been increasing at a rate of approximately 0.12℃ per decade.[42]

Projected Climate Hazards

61. Under the SSP2-4.5 scenario[43] used by the Climate Change Knowledge Portal and summarized in the CRVA, climate hazards across The Bahamas are projected to intensify, particularly through higher temperatures, more frequent extreme heat, seasonal shifts in precipitation, sea-level rise, and more intense tropical cyclone rainfall.
62. *Rising Temperatures*: Mean annual temperatures in The Bahamas are projected to increase by 0.8°C to 2.3°C by 2050 and by 1.2°C to 2.5°C by 2100. Substantial increases in the frequency of hot days and hot nights and decreases in the frequency of cold days and cold nights, are projected to occur, with the most rapid changes during the June–August period.[44]
63. In North Andros, the average annual and seasonal projected increases over the RCP 2.6 and 8.5 scenarios for the medium term (2040-2060) are: 1.0-1.6℃ annually; for the long term (2070-2090) are: 0.9-2.8℃ annual. Projections show that the annual percentage of days when maximum temperatures are above the 90th percentile (hot days) for North Andros: under RCP 2.6, it reaches up to 60% by the end of the century and, according to RCP 8.5, it reaches 100% by the 2070s. By the end of the century the longest duration of a heatwave, as defined by current standards, could last up to four months.[45]
64. *Seasonal Precipitation Shifts*: Projections indicate wetter wet seasons and drier dry seasons. Significant changes in seasonal precipitation are projected. In particular, precipitation during June–July–August is projected to decrease by 3.9% for 2020–2039 and by 5% for 2040–2059, while precipitation is projected to increase by 4.2% to 4.6% in other seasons during 2040–2059, especially in October. The number of consecutive dry days is projected to increase in June and July, while the number of consecutive wet days is projected to increase in October and decrease in July, August, and September. In practical terms, October is expected to become wetter, with more intense rainfall over more days, while June–July–August is expected to become drier. Relative humidity is projected to increase throughout the year, except from June through September.[46] Intense rainfall (1 in 100 Year return period) is also projected to increase by 10%, to >300 mm/d[47].
65. *Tropical Storms and Hurricanes*: While the future frequency of tropical cyclones remains uncertain, their intensity and associated rainfall rates are expected to increase, with a higher proportion of intense storms[48]. The number of Atlantic hurricanes reaching Category 4 or 5 intensity is projected to increase by about 10%, while the strongest winds of tropical storms and hurricanes are projected to increase by about 3%[49]. For Andros, the future is likely to be characterized by more intense hurricanes with higher winds and greater rainfall, including a projected increase in rainfall rates of 20% to 33% near hurricane cores by the end of the century[50].
66. The historical average Standard Precipitation and Evaporation Index (SPEI-12) trend has reduced from +0.3 in 1950 to -0.3 in 2020. The projected SPEI will reduce by up to -0.7 per decade by 2063[51].
67. *Sea-Level Rise*: In AR6, the IPCC projects that, by 2050, global mean sea level will increase by 0.1 m to 0.4 m relative to 1995–2014 under low and moderate scenarios[52]. For the Andros region, by 2050, mean SLR is projected to be 0.28m for RCP4.5 and 0.32m SSP2-4.5. By 2100, mean SLR is projected to be 0.82m for RCP4.5 and 0.83 for SSP5-8.5. AR6 (IPCC 2022) suggests that if expert judgement on high impact ice-sheet processes and inputs from a model incorporating Marine Ice Cliff Instability are considered then by 2100, SLR may reach up to 1.68m for Andros Island according to SSP5-8.5.[53]
68. *Sea Surface Temperature:* For the Andros region in projections to the end of the century, in RCP 2.6, the rate of increase is projected to be 0.07 ℃ per decade, while in RCP 8.5, the rate is 0.39 ℃ per decade.[54]

Observed impacts

69. Climate impacts are already affecting The Bahamas through a combination of slow-onset processes and rapid-onset events. According to the 2026 Global Climate Risk Index, The Bahamas ranks among the **10 countries most vulnerable to climate change and among those at greatest risk from storm surges** in terms of coastal population exposure, coastal urban areas, and GDP loss. Between 1995 and 2024, the country experienced 17 extreme weather events, resulting in 400 deaths, ranking 5th in terms of fatalities per 100,000 inhabitants, affecting 53,000 people, and causing economic losses of US$9.1 billion, ranking 7th in terms of losses as a percentage of GDP.
70. These impacts occur through multiple, mutually reinforcing pathways and represent a growing threat to forest, marine, and coastal ecosystems and biodiversity loss; community health and safety; local and national food security; coastal infrastructure; and climate-sensitive livelihoods. Rising temperatures, prolonged dry periods, and heat waves contribute to **drought, heat stress, wildfire risk, and pressure on water resources**, directly affecting human and animal health and agricultural productivity. Hurricanes, storms, sea-level rise, and extreme rainfall generate storm surge, coastal flooding, erosion, and saltwater intrusion, causing **damage to infrastructure, settlements and production, and reduced freshwater availability**. Rising sea surface temperatures, marine heatwaves, and ocean acidification further **threaten coral reefs, seagrass beds, mangroves, fisheries habitats, and marine-based livelihoods**. These impacts are especially relevant for the Family Islands: climate change magnifies risks tied to isolation and underdevelopment and where settlements, roads, public facilities, agricultural areas, fisheries infrastructure, and ecosystem-dependent livelihoods are concentrated in low-lying coastal zones. At the national level, it is estimated that about 130,000 people live on land below 1 m above sea level and within 5 km of the coastline, while 2% of road networks and 13% of airports would be

[41] Ibid.
[42] Ibid.
[43] SSPs are a method of assessing future scenarios that seeks to combine the knowledge of the physical sciences of climate change with the societal impacts brought on by the vulnerability caused by climate change. SSP2-4.5 is referred to as the 'middle of the road' development pathway. SSP2-4.5 corresponds to emissions reductions that are roughly in line with the upper bounds of the latest Nationally Determined Contributions and global warming of around 2.7°C at the end of the 21st century.
[44] Le Groupe-conseil Baastel. (2023). Climate Risk and Vulnerability Assessment for The Bahamas.
[45] Smith Warner. (2022). Climate Change, Met-Ocean, and Coastal Analyses.
[46] Le Groupe-conseil Baastel. (2023). Climate Risk and Vulnerability Assessment for The Bahamas.
[47] GCF. (2026). Funding proposal package for FP298: Climate Resilience of the Water Sector in The Bahamas (GCF/B.44/02/Add.14).
[48] RACE for Resilience (R4R). (2025, July). Program: Transforming Family Islands into resilient, abundant and competitive ecozones.
[49] GCF. (2026). Funding proposal package for FP298: Climate Resilience of the Water Sector in The Bahamas (GCF/B.44/02/Add.14).
[50] Smith Warner. (2022). Socioeconomic and Biophysical Assessments.
[51] GCF. (2026). FP298 Funding Proposal.
[52] Le Groupe-conseil Baastel. (2023). The Bahamas CRVA
[53] Smith Warner. (2022). Climate Change, Met-Ocean, and Coastal Analyses.
[54] Ibid.

affected by a 1 m sea-level rise[55].

71. Over the last decade, **four major storms**—Hurricanes Joaquin, Matthew, Irma, and Dorian—caused **over USD 4.23 billion in total estimated economic impact**, equivalent to approximately **35–40% of national GDP**. Hurricane Dorian (2019) was the costliest event, at USD 3.4 billion. Damage to the housing sector from these four events totaled USD 1.9 billion, while the tourism sector experienced losses of approximately USD 1.2 billion. Collectively, these four storms caused cumulative damages and losses to the agriculture, fisheries, and environment sectors exceeding US$370.5 million, with particularly devastating consequences for small island communities dependent on these livelihoods.[56] The country's fiscal capacity, economic stability, and development trajectory were significantly compromised, particularly in the Family Islands, where infrastructure and services are limited and widely dispersed[57].
72. In Andros, observed impacts are closely linked to the island's low-lying topography, coastal settlement pattern, remoteness, fragmented transport links, and dependence on natural resources. Hydrometeorological events and coastal flooding have damaged coastal and inland infrastructure, accelerated erosion, undermined roads, affected freshwater lenses and coastal settlements, disrupted inter-island transport routes that supply food to Family Island communities, degraded ecosystems that provide natural protection—including mangroves, wetlands, reefs, and seagrass beds—and disrupted the lives and livelihoods of fishers, farmers, and tourism operators.
73. **Hurricane Matthew** (2016) was the event that most affected Andros in recent years. Total hurricane costs were estimated at **USD 580.4 million**; the main impacts were damage to the **housing sector and losses in the tourism and fisheries sectors**. The productive sectors —tourism and fisheries—accounted for nearly USD 109.3 million of the total USD 145.5 million, or 75%, in income losses caused by the hurricane, and USD 130,172,750 in damages, or 35% of total damages. Fisheries had the highest ratio of income loss to damage: for each dollar of hurricane damage, there were USD 25 in lost income in the fisheries sector, largely because fishers could not land, process, or store catch due to damaged docks and lack of ice plants.
74. The **east coast of Andros** experienced powerful surge and wave action, causing inundations that destroyed coastal structures and infrastructure, causing damage and losses equal to USD 26,447,939. **North Andros** was severely affected by hurricane winds and flooding from storm surges of 2.7 to 3.7 m, especially in Lowe Sound and Conch Sound, resulting in significant damage to the housing sector and losses in the fishing sector. Total damage in Lowe Sound was estimated at USD 665,500; some buildings were destroyed and only their foundations remained, while many residents moved inland after the event. The fishing sector was also severely affected in this area. Fishing is a critical part of local livelihoods. Most operators in the sector are small artisanal fishers, and all were affected; estimates assumed that 90% of the fleet was affected. Among other gear destroyed by the hurricane, about one-third of North Andros lobster traps were lost. However, 60% of the damage was to facilities: the hurricane destroyed a fish market and a lobster tail processing plant. For small fisheries, estimates depend on the damage suffered by the fleet, which is an important constraint for the rapid recovery of production. In North Andros, total losses were estimated at USD 300,858. Lobster accounted for 58% of the total, followed by other species at 34.3%.[58]
75. In **agriculture and fisheries** value chains, disaster impacts are amplified when **damage to productive assets is combined with weak post-harvest and logistics infrastructure**. Hurricanes and flooding can damage **farms, vessels, fishing gear, landing sites, processing plants, cold storage, roads, docks, and storage depots**. These losses erode the base of local food production and delay livelihood recovery. Storm surge and flooding have repeatedly damaged roads, docks, and storage depots, **cutting off Family Island producers from domestic and export markets**. Even where crops, vessels, or catches survive, producers may be unable to land, process, store, or transport products to buyers. The **collapse of transport and storage infrastructure amplified food insecurity** in already vulnerable communities, indicating that the absence of resilient post-harvest facilities greatly magnifies disaster impacts.
76. This creates income losses beyond the initial physical damage and contributes to **food supply disruptions, higher food prices, and reduced rural livelihoods in a country that already imports about 90% of its food**.
77. Andros' freshwater resources are highly vulnerable to **saline intrusion** because the island depends on shallow freshwater lenses formed by rainfall recharge overlying denser saline groundwater. In The Bahamas, groundwater is usually encountered less than 5 feet below the ground surface. These lenses are naturally thin, dynamic, and sensitive to changes in rainfall, sea level, storm surge, and abstraction patterns. Six-meter storm surges associated with Hurricane Dorian (2019) inundated wellfields exploiting the freshwater lens in north-western North Andros, increasing salinity and forcing reductions in pumping rates into the public water supply.
78. **Wildfires** are also an observed and emerging impact of climate change. While wildfires can originate from multiple causes, climate change **intensifies their magnitude and amplifies their severity** by creating conditions of extreme dryness and temperature—climatic conditions already observed and projected. In 2025 in Andros, forest fires increased by 139% year-on-year[59]. Data from Global Forest Watch indicate an accelerating trend of tree cover loss driven primarily by wildfires. Between 2001 and 2025, Andros lost 13,300 hectares of tree cover, and fire was responsible for 60% of this loss (7,900 hectares), surpassing other land-use change factors such as urban expansion or agriculture. 2025 began with a prolonged drought, registering the greatest loss of tree cover due to fires in the analyzed period, with 3,031 hectares destroyed, representing 38% of the total loss that year.[60] Peak fire seasons on Andros are directly associated with dry period, with South Andros experiencing a more extended season. The impact of fires is not limited to the **degradation of forest biomass**; it generally **extends to productive areas** of the island, destroying crops, storage facilities, and commercial sites. BAMSI reported that 75% of its mango trees, 40% of its cattle pastures, and 30 beehives were destroyed when a fire swept through the forests in April 2024.[61]
79. **Heat waves are also affecting productivity** in the agricultural and livestock sectors. Their impact on agricultural yield varies depending on the crop and its stage of development; however, most crops generally begin to experience productivity declines when temperatures exceed 30°C, with tomatoes among the most sensitive. For the most common livestock species, heat stress begins at temperatures above 25°C, and at slightly lower thresholds for chickens and pigs, which are unable to cool themselves through

[55] Le Groupe-conseil Baastel. (2023). The Bahamas CRVA.
[56] Carrera-Marquis, D., Espiga, F., & Johnson, T. (2022). IDB Dala Assessments: Synthesis: Joaquin, Matthew, Irma and Dorian. https://doi.org/10.18235/0004232???
[57] ECLAC & IDB. (2015–2020). *Damage and Loss Assessments for Hurricanes Joaquin, Matthew, Irma, and Dorian in The Bahamas*. https://www.cepal.org/en/publications
[58] Bello, O., Williams, R., Hendrickson, M., De Andrade, R., Mery, G., Bazo, A., De Quattro, J., Ibarra, F., Marcano, B., Marconi, S., Ruiz, E., Attademo-Hirt, F., Nelson, M., & Barón, M. E. (2020). Assessment of the Effects and Impacts of Hurricane Matthew, The Bahamas. https://doi.org/10.18235/0002626
[59] Rolle, R. (2026, January 28). *Fire Damage Costs Soar 470% to $58.2M*. The Tribune.
[60] Global Forest Watch. (n.d.). *North Andros, Bahamas: Deforestation Rates and Statistics*.
[61] The Tribune. (2024, April 15). *BAMSI Crops Badly Hit by Andros Fire.*

sweating.[62] BAMSI reported that the 2023 heat waves caused a 5% to 7% decrease in egg production[63].

80. Climate change also increases the vulnerability of crops by favoring the **proliferation, establishment, and spread of agricultural pests and diseases**. Rising temperatures accelerate insect metabolism and reproductive cycles, allowing pests to complete more generations per year, reduce seasonal mortality, and expand into new areas. At the same time, recurrent droughts generate water stress in crops, weaken their natural defenses, and favor more intense attacks by insects and nematodes, while higher humidity during rainy periods creates favorable conditions for fungal pathogens.[64] These processes affect relevant crops in The Bahamas such as sweet potato, which is exposed to weevils and root-knot nematodes[65]; citrus, affected by Huanglongbing (citrus greening disease) transmitted by *Diaphorina citri*[66]; and bananas and plantains, which are vulnerable to Black Sigatoka[67]. Together, these dynamics reduce yields, deteriorate the market quality of agricultural products, and increase phytosanitary control costs.
81. **Cold waves** can also affect climate-sensitive livelihoods and production systems in a subtropical environment such as Andros. The cold wave recorded in January 2025 affected the recreational fishing sector and was particularly harmful to tropical game fish species, including snook, bonefish, and tarpon, as well as their prey[68]. Cold stress can also affect **agricultural yields**, **as many crops grown in Andros are tropical or subtropical species** with limited tolerance to low temperatures. In these crops, cold conditions can slow metabolic activity, stagnate growth, and, in the case of vegetables such as tomatoes, potentially compromise production for an entire season.
82. The **ocean is warming** much faster than in previous decades, contributing to the doubling and intensification of marine heatwaves, increased surface acidification, and oxygen loss from the surface to 1,000 m depth, directly impacting the health of marine ecosystems. The IPCC Special Report on the Ocean and Cryosphere in a Changing Climate (2019) indicates that changes in sea level and temperature have already adversely affected Tropical Atlantic ecosystems, particularly the upper water column, corals, and coastal wetlands. In The Bahamas, 2015 was a particularly bad bleaching year. Shortly after summertime temperature highs, **nearly 70% of corals surveyed off Andros and Abaco were bleached, with 100% of corals bleached at some sites**[69]. In April 2024, NOAA and the International Coral Reef Initiative confirmed that the world had entered its **fourth global coral bleaching event**, driven by record ocean heat. **The Bahamas was among the Caribbean states affected**, with local environmental groups reporting widespread bleaching across reefs.[70]
83. The **degradation of coral reefs** has direct implications for commercial and recreational fisheries in Andros and in the Caribbean. From 2000 to 2019, **fish production in the Caribbean dropped by 40%,** from around 100,000 metric tons to 60,000 metric tons[71]. Many fisheries depend on coral communities and associated habitats, such as mangroves, seagrass beds, and salt marshes, for breeding, feeding, reproduction, and shelter. As reef health deteriorates, **habitat for juvenile fish is reduced, reef-dependent species become more vulnerable, and the interconnected habitats that support commercially and culturally important fisheries are weakened**. Furthermore, damage to, or the disappearance of, reefs increases the vulnerability of mangroves, seagrass beds, and beaches that function as interconnected habitats, as corals help break waves and protect coastal ecosystems[72]. In Andros, this risk is particularly significant because commercial fishing, including crab and sponge harvesting, is one of the island's most important income-generating activities, and Andros' nursery habitats support a substantial portion of The Bahamas' lobster production. Rising sea temperatures caused by climate change could **shift the distribution of some fish species** toward cooler waters, alter their reproductive habits, deplete local populations, and reduce fish availability around Andros[73]. These impacts could affect commercial fisheries for species such as lobster, snapper, Nassau grouper, conch, and other marine resources, while also harming recreational fisheries. On-the-ground consultations revealed concerns about the already declining availability of fish and fisheries productivity, which directly affects household income, food security, and livelihood resilience in coastal communities.
84. Gender-specific climate impacts: Stakeholders in Andros have noted that extreme heat affects women differently than men, with reported impacts on hormonal cycles. Specifically, facilities like the BAIC Packing House currently lack proper heat insulation and cooling systems. Because **women** are predominantly employed in these processing and administrative roles, they are **subject to prolonged exposure to intense heat** within these buildings, which stakeholders report leads to both produce **loss and physical exhaustion for the workers**[74]. Additionally, **pregnant women and small infants are more susceptible to complications from heatwaves**. The high prevalence of iron-deficiency anemia (29%) among pregnant Bahamian women further increases their vulnerability to the nutritional disruptions caused by climate-induced crop failures and rising food prices. Climate-related disruptions to essential services (such as water and electricity) disproportionately increase the manual labor burden on women, who are the primary managers of household health and hygiene[75]. Women also face heightened **safety risks** during and after extreme weather events. Hurricane Dorian highlighted that many emergency shelters were not compliant with international standards for gender-responsive planning, lacking adequate accommodations for women and girls with disabilities and increasing the risk of sexual and gender-based violence[76]. Furthermore, women-led households in low-lying areas like Lowe Sound report a higher need for temporary relocation due to storm surges, yet they often have **fewer alternative income sources** to sustain themselves during displacement[77].

Projected impacts

85. Projected hazards are expected to interact and compound, increasing exposure and systemic vulnerability, particularly in the Family Islands.
86. IMF analysis (2025)[78] indicates that climate change could substantially reduce The Bahamas' land area and undermine agricultural and fisheries productivity over the long term. Given the country's naturally low elevation, climate change could place about 41% of the national land area and 22% of the population below sea level, exposing private assets, public infrastructure, and settlements to

[62] WMO. (2026, April 22). *Extreme Heat Pushes Agrifood Systems to the Brink.*
[63] ZNS Bahamas. (2023, August 4). *BAMSI Increases Production at Poultry Facility.*
[64] FAO & IPPC. (2021). Scientific Review of the Impact of Climate Change on Plant Pests.
[65] CARDI. (n.d.). Introducing Farmers to Sweet Potato Weevil Management Techniques.
[66] Liu, Y. H., & Tsai, J. H. (2000). *Effects of Temperature on the Biology and Life Table Parameters of the Asian Citrus Psyllid, Diaphorina citri Kuwayama.* Annals of Applied Biology.
[67] Bebber, D. P. (2019). *Climate change effects on Black Sigatoka disease of banana.* Philosophical Transactions of the Royal Society B, 374(1775), 20180269.
[68] Bonefish & Tarpon Trust. (2011). *Bonefish & Tarpon Journal: 2011 Edition*.
[69] Dahlgren C., K. Sherman, L. Haines, L. Knowles, K. Callwood. (2020). *Bahamas Coral Reef Report Card Volume 2: 2015-2020.*
[70] CCEAU. (2025). The Bahamas' NDC 3.0.
[71] Joint SDG Fund. (n.d.). *Why Caribbean Coral Reefs Are Dying—and Why It Matters.*
[72] Le Groupe-conseil Baastel. (2023). The Bahamas CRVA.
[73] Smith Warner International Limited. (2024). D9 Final Project Report: Baseline Studies for Hazard Resilience of Natural Infrastructure in Andros, The Bahamas (Revised). BH-L1043.
[74] Women's only consultation in Nicols Town, North Andros, May 28th, 2026. Site visit to BAIC Packing House, May 28th, 2026.
[75] Ministry of Health & MAMR. (2017). National Food & Nutrition Security Policy and Agenda for Action.
[76] Ministry of Social Services. (2024, July). Bahamas 2024: Beijing+30 National Review.
[77] Smith Warner. (2022). Socioeconomic and Biophysical Assessments.
[78] IMF. (2025, April). Assessing Climate Change Risks—Potential Output Losses and Gains from Strengthening Resilience: The Bahamas (Selected Issues Paper No. 2025/030).

permanent inundation and higher storm-surge risk. The IMF also projects that hurricane-related damages in The Bahamas will increase by 31% under 3°C warming and by 42% under 4.3°C warming.

87. Projected ocean changes would also affect the natural capital that supports The Bahamas' food systems, tourism economy, and coastal protection. The IMF notes that rising sea surface temperatures and ocean acidification could reduce available marine fish stocks, affecting ocean biodiversity and food security. Without adaptation, a 0.5 m sea-level rise could cause the complete loss of up to half of sandy beaches located near hotel infrastructure. Inundation of mangroves, together with coral bleaching and reef degradation, would further reduce biodiversity, weaken natural coastal protection, and lower the attractiveness of The Bahamas as a tourism destination over time. By 2050, it is predicted that 90% of coral reefs worldwide will experience bleaching annually[79].
88. The economic effects of these projected impacts are expected to be unevenly distributed across islands. Smaller Family Islands, including Andros, Exuma, Cat Island, and other smaller islands, may experience disproportionately higher income losses because of their exposure to sea-level rise, reliance on natural capital, and lower adaptive capacity compared with New Providence and Grand Bahama. IMF modelling also suggests that, without adaptation, sea-level rise and recurring natural hazards could generate severe long-term output losses: by 2100, combined losses from permanent inundation and natural disasters could reach 8.3% of GDP under an intermediate emissions scenario and 11.1% under a severe warming scenario. The trade sector is especially vulnerable because it relies heavily on natural capital, including sandy beaches, coral reefs, arable land, and fish stocks.
89. In North Andros, projected risks of coastal flooding and erosion have been modelled under a 100-year return period event and the IPCC RCP 8.5 sea-level rise scenario for 2050. The modelling covers coastal flood extent, dry beach erosion, and the potential failure of coastal protection structures. Compared with the 2018 baseline, inundation extent could increase by 5.6%, eroded dry beach area by 11.2%, and the length of potentially collapsed coastal structures could increase fourfold by 2050, particularly in Morgan's Bluff, Conch Sound, and Mastic Point.[80]
90. Rising sea levels and intensified storm surges would also place additional pressure on already scarce freshwater resources, with direct implications for agricultural productivity and water security. Higher temperatures are projected to increase evapotranspiration and reduce groundwater recharge, while sea-level rise is expected to alter freshwater lens morphology by pushing lenses upward and inland, reducing their area and volume. Modelling of Andros' freshwater lenses estimated that climate change could reduce average annual recharge by 11.4%, using monthly projections of 2090s temperature and rainfall derived from global circulation models (GCMs) in 2009. Under a 0.6 m sea-level rise scenario combined with reduced recharge, freshwater lens area is projected to decline by 16.8% in South Andros and 4.1% in North Andros, while freshwater lens volume could decline by 24.2% and 5.9%, respectively. These results indicate that smaller and marginal lenses, especially in South Andros and at the edges of wellfields, are more vulnerable to salinization, with direct implications for drinking water supply, agriculture, and ecosystem health.

Vulnerability

91. These projected hazards are expected to interact and compound, increasing exposure and systemic vulnerability—particularly in the Family Islands—and placing urgent demands on climate-resilient planning, investment, and governance.
92. The 2023 **CRVA analyzes current and future vulnerability to slow-onset climate hazards** across 17 islands of The Bahamas, including Andros. Andros shows significant exposure to coastal hazards, with medium- and high-exposure segments along much of its coastline. The report estimates that, without the protection provided by coastal and marine habitats, approximately 65% of Andros' coastline would be highly exposed; with these habitats present, this share is reduced to approximately 18%. This indicates that mangroves, seagrasses, coral reefs, coppice forests, and pine forests function as a form of natural adaptive capacity by reducing the physical exposure of the coastline and contributing to protection against wave action, flooding, and erosion.
93. However, this natural adaptive capacity is not stable. The CRVA identifies mangroves as the ecosystem facing the highest climate risk. Mangroves are highly exposed because of their coastal location and their sensitivity to SLR, coastal erosion, and ocean acidification. They are also assessed as having critical vulnerability and are exposed to non-climatic pressures, including pollution, invasive species, habitat loss, and overexploitation. By contrast, coppice and pine forests present an overall medium climate risk, with medium exposure and high vulnerability. The CRVA also notes that Andros has the largest protected area among the islands assessed, which may increase its resilience to future impacts, provided that these areas maintain their ecological functionality and are effectively managed.
94. The vulnerability of livelihoods and households in Andros is closely linked to the degradation of coastal and marine ecosystems. At the national level, the CRVA classifies **tourism, agriculture, fisheries, and water resources as highly exposed sectors**, with high vulnerability and high climate risk. Agriculture is highly exposed because agricultural lands on islands such as Andros are located at low elevations, even where they are not immediately adjacent to the coast. Fisheries are also highly vulnerable, as changes in ocean temperature, acidity, and species distribution affect fish, shellfish, and crustaceans, while mangrove loss can reduce essential nursery habitats for fisheries. This dependence on natural-resource-based income increases household vulnerability in Andros, as communities may face simultaneous losses of housing, income, productive assets, and food security. Limited access to affordable agricultural and climate risk insurance further reduces the capacity of households and producers to recover after losses. These combined impacts on agriculture, fisheries, and ecosystem services have direct implications for food security, as they affect the availability of locally produced food, increase reliance on imports, and reduce the capacity of households to maintain stable and affordable food access under climate stress.
95. Complementing the CRVA, **baseline studies conducted under the Integrated Coastal Zone Management (ICZM) program** identify hurricane-related storm surge and coastal flooding, intensified by SLR, as the primary acute hazard for Andros. These studies show that **North Andros has the highest climate risk compared with other regions of Andros**, with Lowe Sound standing out as the most critical area for storm surge and coastal flooding. Lowe Sound consistently registers the highest flood levels and the greatest inland extent of flooding because the community is located on very low-lying land between the sea and marshes, allowing storm surge waters to merge with other water bodies. Lowe Sound also has the highest number of residential buildings and roads exposed to storm surge across the assessed scenarios, while more than 50% of its population is exposed under both current and future storm surge scenarios. In Lowe Sound, most of Queen's Highway is classified within medium- to high-risk zones. This contrasts with Burnt Rock and The Bluff, where flooding remains more spatially confined, and with Stafford Creek, where significant flood depths occur but within a more linear coastal and stream flood corridor. The flooding in Lowe Sound can simultaneously affect homes, roads, fisheries landing and handling areas, and access to markets and services, thereby increasing the risk of short-term food access disruptions and longer-term livelihood losses.

[79] Reef Resilience Network. (n.d.). *Mass Coral Bleaching*.
[80] IDB. (2022). *North Andros Urban Land Use Plan Pilot Project* [Draft pilot]

96. In terms of **social vulnerability**, North Andros and Mangrove Cay have the highest average vulnerability to climate-related risks across the Andros districts. North Andros has the second-highest climate sensitivity in the Andros chain, influenced by limited asset ownership, households with members who have physical or mental disabilities, and homes that are not sufficiently elevated above sea level.
97. Several demographic and socio-economic groups in The Bahamas, and specifically in Andros, face **disproportionate climate risks** due to their high sensitivity and lower adaptive capacity. Women are typically responsible for domestic activities and the care of dependents, which increases their physical and mental vulnerability when essential services like water and electricity are disrupted during disasters. The prevalence of PWDs in Andros is 4.37%, which is significantly higher than the national average of 2.88%. Approximately 75.5% of PWDs in Andros lack health insurance, making it much harder for them to recover from injury or illness following a climate event. They also face greater barriers to accessing early warning systems and evacuation routes. Many low-income households in Andros have limited formal savings (14% have none) and rely on climate-sensitive sectors like fishing and small-scale farming. These households often lack insurance for their residences (49% have none) or income-earning equipment (78% have none)[81].

Non climate drivers

98. The most relevant non-climatic drivers identified in Andros are listed below:
99. **Dispersed and centralized geography undermining service delivery, supply chains, and disaster response**: The Bahamas' extreme archipelagic dispersion—with most islands separated by 20 to 125 miles of open sea and without direct transport links—makes service provision costly and inefficient. Inter-island travel relies almost entirely on Nassau as a transit hub, creating structural fragility: a trip from North Andros to South Andros requires flying to and from New Providence despite being on the same landmass. Limited connectivity by sea and air slows disaster response, disrupts food supply chains, and isolates communities during climate events. This structural weakness is compounded by the overconcentration of population and economic assets and services, leaving Family Islands chronically underserved and disproportionately exposed. A single major climate event in Nassau has the potential to trigger nationwide economic paralysis, displacement, and prolonged recovery, further widening the gap between the capital and islands like Andros.
100. **Land tenure:** As stated in Andros Master Plan (2017), the majority of land issues on Andros is related to access to Crown Land[82], which conforms most of the land. A good percentage of all land is in dispute, and the main reason is the lack of clear and easily accessible documentation. Slow response times and lack of access to information either stymies development or encourage ad-hoc building without permits. Squatting is also a major issue in some areas of North Andros in particular.
101. **Pollution from solid waste and wastewater**: The North Andros Land Use Plan identifies domestic waste, landfill leachate, detergents, industrial waste, pesticides, and fertilizers as active sources of pollution. Sinkholes, swamps, and marshes are commonly used as informal waste disposal sites, and an unsanitary open landfill is located within North Andros' pine forest. In Andros, waste—including vehicles and old appliances—regularly ends up in forested areas, where it triggers fires or creates rodent-infested accumulation points.
102. **Unsustainable agricultural practices and risk of freshwater lens contamination and overexploitation**: The freshwater lens is threatened by unsustainable farming practices. Concerns have been documented that agricultural operations could negatively impact freshwater resources through pesticide use, improper fertilizer management, proximity of cultivation to lens recharge areas and overexploitation of the water lens.
103. **Limited sustainable fisheries management and increasing pressure on commercial species:** Unsustainable fishing practices can contribute to habitat destruction in Andros' coastal and marine ecosystems, while limited stock data, weak enforcement capacity, and increasing legal and illegal fishing pressure place commercial species at risk. Pressure on lobster, conch, groupers, snappers, sponges, and sea cucumbers is increasing.
104. **Invasive species**: Invasive species, particularly *Casuarina equisetifolia*, are affecting Andros' pine and coastal ecosystems by displacing native vegetation, altering forest composition, and increasing erosion and coastline loss. Due to their salt tolerance, rapid growth in disturbed coastal areas, and shallow root systems, casuarinas can facilitate beach and dune undercutting during high tides and atypical wave action, while also being more prone to storm-related damage. In addition, several invasive or non-native aquatic species with potential impacts on marine and coastal ecosystems have been identified in Andros, including microalgae, green algae, cichlids, and the Indo-Pacific red lionfish (*Pterois volitans*).

Barriers to adaptation

105. **Limited inter-agency coordination and limited knowledge and institutional capacities for evidence-based climate resilient food system planning:** Institutional and technical gaps limit the generation, coordination and use of climate risk information across agriculture, fisheries, infrastructure, land use, water management and ecosystem management institutions. This constrains climate-informed production planning, infrastructure siting, crop selection, water management and investment prioritization, while weak knowledge-sharing and multi-stakeholder dialogue mechanisms prevent evidence, project lessons and adaptation practices from reaching decision-makers, practitioners, producers and communities. This limits the ability to design and implement integrated, climate-resilient food systems that ensure stable and sustainable food availability under climate stress.
106. **Absence of integrated climate-resilient food system planning instruments**: Most Family Islands lack integrated planning instruments to guide climate-resilient food system development, and no national strategy currently aligns agriculture, fisheries, infrastructure, land use, ecosystems and investment priorities under climate change. This results in ad hoc decision-making, reactive infrastructure deployment and missed opportunities to guide long-term adaptation investments. This results in ad hoc decision-making, reactive infrastructure deployment and missed opportunities to guide long-term adaptation investments, including those critical for strengthening national and local food security.
107. **Fragmented and reactive support systems and underinvestment in research, extension and producer services**: Government support to food and fisheries sectors remains largely reactive to climate and disaster impacts, rather than focused on building adaptive capacity. Underinvestment in applied research, extension services, climate-resilient technologies, georeferenced baselines and producer support limits access to technical guidance, locally tested solutions and advisory services, thereby constraining the development of climate-resilient and productive food systems.
108. **Fiscal constraints, high implementation costs and limited operational readiness for climate-resilient infrastructure:** Local

[81] Le Groupe-conseil Baastel. (2023). The Bahamas CRVA.
[82] Crow Land is public land owned by the state and administered on behalf of the Crown by the Bahamian government.

governments across the Family Islands have limited fiscal authority, budgetary control and revenue-raising powers to plan, prioritize and finance local adaptation investments. These constraints are compounded by the high unit costs and logistical complexity of implementing climate-resilient infrastructure in island contexts, driven by remoteness, transport costs, limited local supply chains and the absence of economies of scale. As a result, critical investments in climate-proofed food system infrastructure, coastal resilience, applied learning facilities and producer support cannot be financed through local resources or domestic financial institutions alone. In addition to financing gaps, these investments require specialized design inputs, technical supervision and clear operation and maintenance arrangements to ensure that infrastructure is climate-proofed, context-appropriate and sustainable over time. Without adequate financing, targeted technical support and operational arrangements, investments such as agro-fishery processing and storage facilities, which are critical for reducing food losses, stabilizing supply and strengthening food security, renewable-energy-supported systems, hydraulic connectivity improvements and hybrid green-grey coastal measures may face delays, increased costs and reduced long-term functionality.

109. **Insufficient climate-resilient productive, post-harvest and market infrastructure:** Agriculture and fisheries systems in Andros are highly exposed to heat, storms, power outages and transport disruptions, while inadequate cold storage, processing and conservation facilities increase spoilage, reduce product quality and limit market access. Limited local processing capacity also prevents producers from preserving, transforming and adding value to agricultural, fisheries and livestock products. In Andros, high input costs, limited mechanization, and inadequate post-harvest systems restrict productivity, resulting in estimated losses of more than 40% for some basic products[83]. These losses have direct implications for food security, as they reduce the availability of locally produced food, increase dependence on imports, and undermine the stability of supply in the face of climate shocks.
110. **Exposure of Lowe Sound to compound coastal flooding and weakened coastal-wetland buffer functions:** Lowe Sound's low-lying location between a shallow lagoonal bay and tidal creek-marsh system makes it highly vulnerable to storm surge, wave overtopping, wind-driven flooding and prolonged inland inundation. Restricted hydraulic connectivity, insufficient culverts, sedimentation and blockage reduce drainage capacity, leaving floodwaters stagnant after storms, disrupting road access, emergency access, food supply chains and fisheries-related livelihoods. These disruptions have cascading effects on local food systems, particularly by interrupting food distribution, limiting access to markets, and affecting the timely availability of food supplies.
111. **Limited technical and organizational capacity, weak producer aggregation and fragmented value chains:** Small-scale farmers, fishers and producers face gaps in technical knowledge, organizational capacity and access to competitive value chains. Value chain and market barriers persist due to fragmented supply chains, weak producer aggregation, and limited coordination among producers, buyers, processors and market actors. These constraints reduce producers' ability to consolidate supply, meet market requirements, access reliable distribution channels, add value to climate-resilient agricultural and fisheries products, and maintain market access during and after climate-related disruptions. This weakens the resilience of local food systems by limiting consistent supply, reducing market access, and constraining the availability of locally produced, climate-resilient food.
112. **Limited access to productive assets and financiers for climate-resilient investment**: Small farmers and fishers operate with extremely limited access to formal financial services. Insurance penetration among small-scale food producers is below 2%, meaning that recovery after climate events is slow, partial, and largely self-financed. The repeated destruction of productive and post-harvest assets forces producers and fishers into cycles of indebtedness, asset depletion, and food insecurity due to reduced production capacity and income instability. In some cases, entire communities dependent on fisheries and agriculture have lost their productive base for multiple consecutive seasons. Women and youth face additional structural barriers to accessing financial tools and remain underrepresented in producer organizations and resilient livelihood structures. Insecurity of tenure discourages farmers from investing in adaptation measures because of high set-up costs (e.g. for drip irrigation) or the long-term investment required to realize a return (e.g. conservation agriculture). Without proof of land tenure, farmers may not be able to access loans, subsidies, grants and other services (e.g. extension services, relief efforts, and meteorological services such as early warning systems).
113. **Unequal access to climate-resilient technologies, services and decision-making**, including age, gender, poverty, education levels, income and asset ownership, geographic location, ethnicity, and language can influence smallholders' vulnerability to climate change and their ability to access, adopt, and benefit from climate-resilient technologies and practices. Women, youth, older farmers, low-income producers and isolated communities may face additional barriers to training, finance, equipment, organizations and decision-making spaces. These inequalities further exacerbate food security risks, as disadvantaged groups face greater constraints in accessing the resources and capacities needed to sustain climate-resilient food production and livelihoods.

Project/Programme Objectives:

114. The project expects to contribute to the following general objective: to **strengthen the climate resilience of food systems** in The Bahamas' Andros Island. This will be achieved by implementing an integrated adaptation model for food systems in Andros that combines evidence-based planning, climate-resilient infrastructure, ecosystem services, and enhanced adaptive capacities of farmers, fishers and food system actors, generating lessons and scalable solutions to inform resilient food system development nationally.
115. The Project intends to accomplish the contribution to the expected goal by working on the following specific objectives:
    - **Strengthen local planning and the use of climate evidence** in Andros to improve decision-making and the prioritization of investments for climate-resilient food systems that can inform national and Family Island-level approaches.
    - **Reduce climate-related disruptions affecting food system continuity** in Andros through the development of productive, storage, processing and market access infrastructure, alongside the protection and enhancement of key coastal ecosystem services.
    - **Strengthen the adaptive capacities of farmers, fishers and other food system actors** in Andros to adopt climate-resilient practices, technologies, improved water management and water-efficient production approaches, support mechanisms and market solutions for resilient production, value addition and market access.
    - **Strengthen knowledge management**, learning and dissemination systems to ensure that climate risk information, project evidence and lessons learned from Andros are captured, exchanged and used by institutions, communities and food system actors to support decision-making, stakeholder ownership and scaling of climate-resilient food system solutions across The Bahamas.

Project/Programme Components and Financing:

[83] Office of the Prime Minister. (2017, February). *Sustainable Development Master Plan for Andros Island*.

Table 1. Project/Programme Components and Financing

Project/Programme Components	Expected Concrete Outputs	Expected Outcomes	Amount (US$)
1. Resilient food system planning	1.1. Improved climate-informed planning instruments for resilient food systems	Strengthened local planning for evidence-based decision-making for climate-resilient food systems	500,000
2. Resilient green and grey infrastructure for agriculture and fisheries	2.1. Critical food system infrastructure and coastal ecosystem buffers enhanced to reduce climate-related disruptions in Andros	Climate-resilient infrastructure and ecosystem services strengthened to support resilient food systems	8,511,521
3. Support services for farmers, fishers and value chain actors	3.1. Climate-resilient training, innovation and producer support services established for farmers, fishers and food system actors	Adaptive capacities of farmers, fishers and food system actors strengthened for climate-resilient production, value addition and market access	2,500,000
4. Knowledge management and learning	4.1: Knowledge sharing, learning exchanges, and multi-stakeholder dialogue facilitated to strengthen climate-resilient food systems	Knowledge management and learning systems strengthened to support climate-resilient food system decision-making and scaling	1,000,000
Project Execution cost (PEC)			1,313,364
Total Project Cost			13,824,885
Project Cycle Management Fee charged by the Implementing Entity			1,175,115
Amount of Financing Requested			**15,000,000**

Projected Calendar:

Table 2. Projected Calendar

Milestones	Expected Dates
Start of Project/Programme Implementation	January 2028
Mid-term Review (if planned)	January 2030
Project/Programme Closing	January 2032
Terminal Evaluation	September 2032

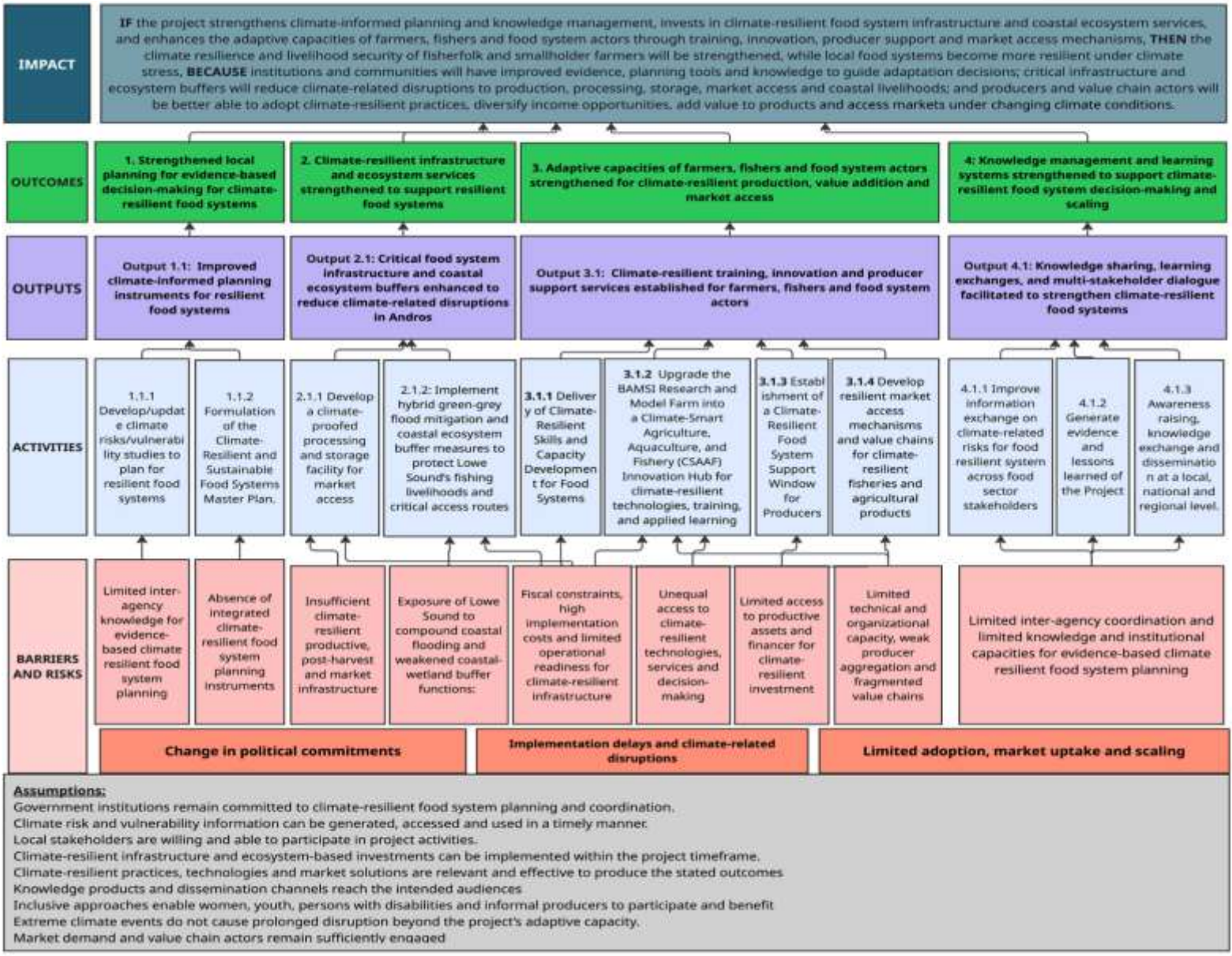
PART II: PROJECT / PROGRAMME JUSTIFICATION

A. Describe the project/programme components, particularly focusing on the concrete adaptation activities of the project, and how these activities contribute to climate resilience. For the case of a programme, show how the combination of individual projects will contribute to the overall increase in resilience.

116. Theory of Change (see Fig.4) assumes that IF the project strengthens climate-informed planning and knowledge management, invests in climate-resilient food system infrastructure and coastal ecosystem services, and enhances the adaptive capacities of farmers, fishers and food system actors through training, innovation, producer support and market access mechanisms, THEN the climate resilience and livelihood security of fisherfolk and smallholder farmers will be strengthened, while local food systems become more resilient under climate stress, BECAUSE institutions and communities will have improved evidence, planning tools and knowledge to guide adaptation decisions; critical infrastructure and ecosystem buffers will reduce climate-related disruptions to production, processing, storage, market access and coastal livelihoods; and producers and value chain actors will be better able to adopt climate-resilient practices, diversify income opportunities, add value to products and access markets under changing climate conditions.

117. The project outcomes are closely aligned with the Adaptation Fund's strategic results framework. **Project Outcome 1**, "Strengthened local planning for evidence-based decision-making for climate-resilient food systems," contributes to **Adaptation Fund Outcome 7** by improving the policy, planning and knowledge foundations needed to promote resilience measures through climate-informed decision-making, planning instruments and investment guidance. **Project Outcome 2,** "Climate-resilient infrastructure and ecosystem services strengthened to support resilient food systems," aligns with Adaptation **Fund Outcome 4** by increasing adaptive capacity within relevant development sector services and infrastructure assets, including food system infrastructure, coastal resilience measures and ecosystem services that reduce climate-related disruptions. Project Outcome 3, "Adaptive capacities of farmers, fishers and food system actors strengthened for climate-resilient production, value addition and market access," contributes **to Adaptation Fund Outcome 6** by supporting diversified and strengthened livelihoods and income sources for vulnerable farmers, fishers and food system actors in targeted areas through improved capacities, producer support, innovation, value addition and market access (see alignment Table 8 in section III.A). **Project outcome 4:** Knowledge management and learning systems strengthened to support climate-resilient food system decision-making and scaling, aligns with Adaptation **Fund Outcome 3,** Strengthened awareness and ownership of adaptation and climate risk reduction processes.

Figure 4. Theory of Change



Component 1: Resilient Food system planning

Outcome 1: Strengthened local planning for evidence-based decision-making for climate-resilient food systems

Output 1.1: Improved climate-informed planning instruments for resilient food systems

118. This output will strengthen the **knowledge base and planning capacities** required to support climate-resilient food systems in The Bahamas. Through the development of climate risk and vulnerability assessments (Activity 1.1.1), and the formulation of a national Food Systems Master Plan (Activity 1.1.2), the project will generate actionable evidence and strategic guidance. These activities will enable **informed decision-making and improved coordination across stakeholders**.

Activity 1.1.1: Develop/update climate risks/vulnerability studies to plan for resilient food systems

119. This activity will support **one climate and agricultural data inventory and gap assessment** and **one integrated** climate risk and vulnerability assessments to inform the planning and design of resilient food systems in Andros.
120. The assessments will combine climate, environmental, and socio-economic and gender equality dimensions to identify priority areas, production systems, and stakeholder groups most exposed to climate risks and most suitable for climate-resilient interventions.
121. The activity will include:
122. **A climate-informed crop suitability and vulnerability analysis**, using available climate scenarios - including downscaled global or regional projections where these exist at sufficient spatial resolution, and complemented by localized downscaling exercises to be conducted under this project where data gaps exist —to assess how future temperature, rainfall, and extreme events may affect agricultural production. This analysis will help identify p**riority crops and production systems** that are climate-resilient, water-efficient, and adapted to local water availability constraints, supporting evidence-based prioritization of value chains and water-positive food system development.
123. **A soil and land suitability mapping**, including characterization of soil conditions, drainage capacity, and exposure to climate hazards, to guide the spatial planning of agricultural activities and infrastructure investments. Crop suitability results will be**8 p** systematically cross-referenced with current and projected market viability criteria — including access to markets, price stability, value chain infrastructure, and demand — through **one integrated climate–soil–market prioritization matrix** to ensure that recommended crops and production systems are both climatically suitable and economically feasible for farmers. This integrated climate-and-market suitability framework will support farmers in adopting good agricultural practices and adaptation technologies, including crop scheduling, integrated nutrient management, and diversification strategies that reduce both climate and market risks.

124. **One integrated GIS geodatabase and up to 6 agricultural risk map sets**, identifying areas exposed to flooding, drought, storm surge, and other relevant climate risks, and assessing how these hazards affect farms, infrastructure, and food system functionality for the past, present and future relevant climate change scenarios. These will support farmers in their decisions as to what commodities to plant through **one farmer-oriented decision-support package**, including up to **4 simplified hazard profiles and up to 4 seasonal risk calendars** co-designed with farmers and extension workers to ensure practical usability. The project will also work with relevant government agencies to formally integrate these maps and tools into national and district-level agricultural planning processes, ensuring their institutionalization and use beyond the project's lifetime, in articulation with the capacity-building components of the project.
125. **One GESI-responsive vulnerability profile of producers and communities**, to identify groups that are more exposed or less able to respond to climate risks, including those with limited access to resources, infrastructure, finance, or climate information services, including market aspects.
- **Integration of climate, environment and vulnerability data into planning**, ensuring that results inform the design of project interventions, including the selection of crops, technologies, infrastructure locations, and support measures.

126. This activity will generate a comprehensive and spatially informed evidence base to guide climate-resilient investment decisions, strengthen targeting, and ensure that project activities respond effectively to both current and future climate risks.
127. Gender and social inclusion: All data collection and vulnerability profiling will be disaggregated by sex, age, and disability to correct the structural "invisibility" of women and informal producers on Andros (based on GESI methodologies for CRVA). For example, hazard and crop suitability mappings may evaluate climate risks to female-led marketing networks, explore resilient crops (e.g., soursop, pigeon peas, jackfruit) pioneered by local women, and analyze structural heat-stress vulnerabilities in processing facilities like the BAIC Packing House, where women dominate the workforce.

Activity 1.1.2: Formulation of the Climate-Resilient and Sustainable Food Systems Master Plan.

128. This activity will support the formulation of **a Climate-Resilient and Sustainable Food Systems Master Plan**, building on the lessons generated through the project's pilot interventions in Andros (Components 2 and 3), and translating them into a strategic framework at national scale.
129. The Master Plan will consolidate evidence from investments in climate-resilient infrastructure, livelihoods, key environmental aspects and food system services, providing a **roadmap to integrate adaptation priorities into national food system governance, planning, and investment decisions**. By embedding climate change adaptation into food system development, the Plan will support the transition from fragmented interventions to a coordinated and resilience-oriented national approach, ensuring that food security policies and investments proactively reduce vulnerability to climate shocks.
130. The Master Plan will also establish clear **pathways for scaling up tested solutions from Andros to other Family Islands**, while strengthening alignment with national adaptation processes, including the National Adaptation Plan (NAP).
131. Gender and social inclusion perspective: The Master Plan will formalize a gender-responsive governance by embedding the National Gender Equality and Equity Policy (2023–2033) currently under development and expected to be finalized before implementation, into national food system planning. The Master Plan may mandate targeted investments in technical and vocational training for women and youth and establish pathways for the formal registration of female farmers, crabbers, and vendors, to support efforts to access to credit, insurance, and other productive assets. Structurally, the Plan may require future infrastructure to mandate climate-resilient cooling and heat insulation standards (directly addressing the heat-stress risks experienced by female processing workers) and enforce international gender-responsive safety standards for emergency and disaster displacement infrastructure.

Component 2: Resilient green and grey infrastructure for agriculture and fisheries

Outcome 2: Climate-resilient infrastructure and ecosystem services strengthened to support resilient food systems

Output 2.1: Critical food system infrastructure and coastal ecosystem buffers enhanced to reduce climate-related disruptions in Andros

132. This output constitutes a core adaptation measure to reduce the vulnerability of Andros' food systems to rising temperatures, climate variability, sea level rise, tropical storms, coastal and inland flooding, and disruptions in energy, transport and market access systems. It combines investments in climate-resilient productive infrastructure with hybrid green-grey coastal resilience measures, addressing two interlinked sources of climate risk affecting food system reliability: post-harvest losses and supply chain disruptions on the one hand, and coastal flooding, erosion, wave impacts and loss of connectivity in fishing communities on the other.
133. Through the upgrade and expansion of the BAIC facility into a Solar-Powered Agro-Fishery Processing and Market Facility (SPMF), the project will reduce climate-induced post-harvest losses by providing integrated cold storage, processing, and aggregation systems designed to function under heat stress and supply chain disruptions. The integration of solar energy systems and rainwater harvesting will ensure operational continuity during power outages, droughts, and extreme weather events. By enabling processing, preservation, and value addition, the facility will allow producers to extend shelf life, reduce losses linked to transport constraints, and improve income stability. The inclusion of local livestock processing will further reduce dependence on external systems and improve food availability under disruption scenarios.
134. In parallel, the output will finance the implementation of integrated coastal resilient infrastructure at Lowe Sound in North Andros, where climate change, coupled with a high exposure due to geographical location and low-lying terrain, is intensifying the magnitude and frequency of tropical storms and hurricanes. These hazards are increasing the risk of coastal and inland flooding, wave impact on exposed livelihoods, coastal erosion, storm surge and the overtopping of critical access roads disrupting connectivity between fishing communities and the rest of the island. At the same time, inefficient hydraulic exchange between wetlands, tidal creeks and the sea can lead to prolonged inland inundation of low-lying areas, leaving water stagnant after storm events and affecting road access, food supply chains, fisheries related livelihoods, market connectivity and evacuation routes. Furthermore, Global Sea Level Rise projections rates which suggest a 5 mm/yr (RCP 2.6) and 12 mm/yr (RCP 8.5) increase, indicate that under the latter scenario by the year 2050 the waterline will move inland about 20 m, and by the year 2100 the waterline could retreat from 100m to even 400m with respect to the current state (see Fig.5).

Figure 5. Sea Level Rise projections for the SSP8.5 current - Source: Smith Werner Intl. 2022



135. This output will finance the implementation of integrated coastal resilient infrastructure at Lowe Sound in North Andros to reduce the impacts of storm surges, coastal flooding, coastal erosion, and prolonged post-storm inundation which disrupts food systems, fisheries, critical access routes, and vulnerable coastal households. The deployment of these measures responds to the growing exposure of low-lying coastal communities and productive systems to climate-related hazards, which are increasingly affecting livelihoods, market access, evacuation routes, and ecosystem services that sustain the island's productivity.

136. Consequently, a **set of hybrid green-grey coastal resilience measures** is supported by this output to: protect critical fishing settlements and productive coastal areas; improve resilience of evacuation and market access routes; restore or enhance coastal-wetland hydraulic connectivity; and to catalyze the scope of ecosystem services, more specifically the protective attributes of mangrove forests, sand dunes and wetlands buffer zones

Activity 2.1.1: Develop a climate-proofed processing and storage facility for market access

137. Agriculture and fisheries systems in Andros are increasingly exposed to **climate-related disruptions that directly affect the reliability and functioning of food systems**, particularly in post-harvest handling, storage, processing, and market access. Current production systems are highly vulnerable to **rising temperatures, more frequent heatwaves, and storm-related disruptions**, which accelerate spoilage, reduce product quality, and disrupt already fragile supply chains.
138. The absence of adequate storage and processing infrastructure compounds these vulnerabilities. Without access to cold storage and processing and conservation facilities, perishable products deteriorate rapidly under high temperatures, leading to **significant post-harvest losses and reduced incomes**.
139. A key systemic constraint is the dependence on the mailboat schedule to Nassau, which limits when products can be transported. Producers are often forced to harvest according to shipping days and store their products for extended periods in inadequate conditions while waiting for transport. Under increasingly hot conditions, this results in **rapid spoilage, loss of value, and in many cases complete loss of production**.
140. The lack of local processing infrastructure and capacity—such as canning, drying, or value addition—further undermines food and nutrition security, exacerbating food loss, as surplus production cannot be stabilized or preserved when fresh market access is delayed.
141. Climate-related shocks also affect the reliability of critical infrastructure, particularly electricity supply, with frequent outages following storm events disrupting cooling systems and further reducing the capacity to preserve products.
142. As a result, producers and fishers face a system that is **highly sensitive to climate variability**, where small disruptions can lead to significant losses across production, value chains, and livelihoods. This undermines income stability, food availability, and the overall reliability of supply to national markets.
143. Improving access to **climate-resilient storage and processing systems**, supported by reliable energy and designed for high-temperature environments, is therefore essential not only to reduce losses but to enable food systems in Andros to function under increasing climate stress.

Proposed Approach: Climate-Resilient Upgrade and Expansion of the BAIC Facility

144. To address the identified climate-driven constraints affecting food systems in Andros, the project will implement a **climate-resilient rehabilitation and expansion of the existing BAIC packing house** (Fig. 6), transforming it into an integrated SPMF.

Figure 6. Existing BAIC Packing House observed during the May 2026 field mission (left), and location map highlighting its central access for farmers across Andros (right).



145. This approach builds on existing infrastructure while addressing critical gaps in post-harvest handling, storage, processing, and system reliability under climate stress. The selected site—located along the main road at the junction to Red Bays—was **validated through field consultations as the most accessible and central location**, making it suitable as a shared hub for producers across the island. The final site selection should also ensure that it is not located in areas exposed to significant climate risks, such as flooding or storm surge, to guarantee long-term resilience and operational continuity.
146. This site is particularly suitable because, in addition to allowing for the use, retrofitting, and upgrading of the existing building, it offers sufficient additional land for the development of complementary and associated infrastructure to establish a climate-efficient

multifunctional SPMF. The selected site is also conveniently located at a safe distance from neighboring communities and towns. The site is strategically positioned near the principal agricultural production areas of North Andros; its proximity to farming operations reduces the risk of post-harvest losses, especially for highly perishable commodities, and contributes to maintaining efficient and cost-effective transportation and storage systems.

147. The current facility lacks insulation, ventilation, and reliable energy supply, resulting in **exposure to extreme heat, operational inefficiencies, and poor working conditions, particularly affecting women workers**. The project will therefore undertake a climate-resilient rehabilitation, including thermal insulation, improved ventilation, and the installation of solar-powered energy systems with backup capacity, ensuring continuous operation during power outages and extreme conditions.

148. The SPMF will be expanded into a **multi-functional, climate-resilient hub**, integrating agriculture, fisheries, and livestock through a circular economy approach. It will be potentially organized through modular areas for agriculture, fisheries, livestock and value-added product innovation, with the final scale and configuration to be defined during the Full Proposal phase. Core functions will include:

- **Processing and transformation capacity** for crops, fisheries, and livestock products, enabling conservation through value addition (e.g. preserves, processed foods, and meat products), reducing the need for immediate sales and minimizing losses under high temperatures and transport delays. Food processing will be performed considering local food safety standards, along with international recognized food safety standards consistent with the principles and practices of Hazard Analysis and Critical Control Point (HACCP) and the Codex Alimentarius;
- **Climate-resilient cold storage and ice production**, allowing producers to preserve products beyond fixed transport schedules, improve product quality, and reduce losses associated with heatwaves and logistical disruptions;
- **A localized livestock processing area** (abattoir) integrated within the facility, addressing a key structural constraint whereby animals currently need to be transported to Nassau for processing. This dependency increases costs and reduces efficiency, limiting access to meat products locally. Local processing will strengthen food system reliability, reduce logistical vulnerabilities, and improve access to locally produced protein, particularly during disruptions;

149. **Circular resource management and green supply-chain practices,** including composting of organic waste, reuse of livestock and fisheries by-products in agriculture, rainwater harvesting, water reuse and recycling mechanisms, water-saving technologies, and improved solid and wastewater management. The facility will also promote energy- and resource-efficient operations, including low-energy lighting, energy-efficient processing and refrigeration equipment, optimized production processes, employee training on energy-saving practices, and sustainable packaging solutions that protect products while minimizing environmental impacts. These measures will help reduce waste, enhance resource efficiency, lower GHG emissions, and strengthen the resilience of local agrifood value chains.;

- **A local market and direct sales area**, enabling producers to sell fresh and processed products directly to the community, strengthening food availability, reducing dependence on external supply, and shortening value chains;
- **Aggregation and coordination functions**, improving alignment between production, storage, and transport, and increasing the reliability of supply chains to Nassau and other markets, through an open-access, service-based model accessible to farmers, fishers, cooperatives, and MSMEs.

150. Furthermore, integrated solid and wastewater management for the facility will be put in place to ensure the proper collection, segregation, handling and disposal of different waste (organic, non-organic). Complementary processes/systems will be integrated as part of the Facility to recover off-cuts (non-commercial or inedible livestock and fish parts/organs) into commercial by-products (e.g. fish meal, fish oil, fish silage, compost or bokashi, others).

151. The specific configuration of processing equipment and storage systems will be defined during the next phase, based on the prioritization of climate-resilient and market-relevant products. Field consultations indicate that producers are prioritizing **heat-**tolerant **crops such as cassava, sweet potato, okra, corn, plantain, and pumpkin**, which will guide the design of infrastructure and services.

152. The **integration of fisheries infrastructure** within the facility remains under assessment, with options including a port-based location (Morgan's Bluff) or full integration at the BAIC site. Preliminary findings suggest that the central location offers significant advantages in terms of accessibility and circular integration, including shared cold storage, ice production, and synergies between agriculture and fisheries. The project will also assess whether a service-oriented Fisheries Service Hub model would be more appropriate than a centralized purchasing or marketing model, allowing fishers to access shared services such as ice production, rapid chilling or blast freezing, cold storage rental, packaging and vacuum sealing, product grading, logistics coordination, equipment support and value-added product development, while retaining ownership of their products and existing market relationships. This service-oriented approach will ensure that the facility functions as a shared climate-resilient asset that supports the broader agri-fisheries sector—facilitating aggregation, processing, storage, value addition and marketing—rather than limiting its role to handling products procured by BAIC. This assessment will consider fisheries value-chain dynamics, trust and governance issues, operational sustainability, equitable access and potential public-private or service-provider arrangements. The final configuration will be confirmed during the Full Proposal phase.

153. The SPMF will constitute a principal service channel for the project's approximately 370 small-scale farmers and fishers, entrepreneurs, producer associations and MSMEs, with particular attention to women, youth and small-scale actors. Facility workers, processors and service providers will also benefit directly, while households and consumers in Andros and national markets will benefit indirectly from a more reliable food supply.

Governance and operational approach (tentative)

154. The operation and management of the SPMF is expected to build on the existing role of BAIC, which currently manages the packing house and plays a key role in agricultural aggregation and market coordination in Andros.

155. Given its mandate and local presence, BAIC is considered, at this stage, a suitable candidate to assume responsibility for the day-to-day operation and maintenance of the facility. However, this arrangement remains tentative and will be further defined during the Full Proposal phase.

156. Stakeholder consultations have highlighted operational and administrative constraints, including delays in payments to producers and limited capacity to manage expanded functions such as processing, storage, and market coordination. To address these gaps, the project will include **targeted institutional strengthening** for O&M, focused on improving financial management systems (including timely payments), operational efficiency, service delivery, and inclusive access, particularly for women and small-scale producers.

157. In parallel, a **governance and oversight framework** will be established to ensure clear operating standards, performance

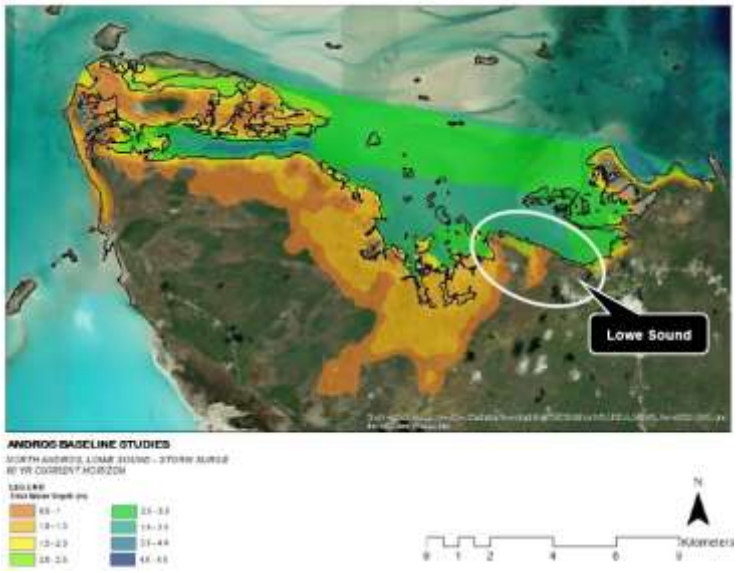
monitoring, and alignment with food safety and national food security objectives. This framework will also help assess and define appropriate arrangements for any fisheries-related service model, including possible partnerships with technical institutions, private operators, or specialized service providers.

158. This approach will strengthen BAIC's capacity to deliver reliable operation and maintenance under climate stress conditions, ensuring that the facility can function continuously and effectively and achieve its intended adaptation outcomes.
159. Gender and social inclusion perspective: The facility's rehabilitation will prioritize women's cooling needs (like advanced ventilation or solar-powered cooling system) in the processing and administrative zones where women are predominantly employed. By integrating continuous solar energy and rainwater harvesting, the design helps reduce operational disruptions and associated workload pressures, particularly in processing and hygiene-related activities.

Activity 2.1.2: Implement hybrid green-grey flood mitigation and coastal ecosystem buffer measures to protect Lowe Sound's fishing livelihoods and critical access routes

160. Lowe Sound is located at a narrow, low-lying strip of land between a shallow lagoonal bay (north) and a tidal creek-marsh system (south), making it highly susceptible to compound flooding (See Fig. 7). Historically, wave overtopping, alongside wind-driven increased water levels, have affected households, fishing livelihoods and critical access routes. The flooding hazard in Lowe Sound is not only due to direct wave impact and sea water inundation, but it is also driven by the restricted hydraulic connectivity between the adjacent wetland/marsh system and the sea. Existing culvert crossings allow hydraulic exchange to some extent, but these seem to be insufficient and vulnerable to sedimentation and blockage, drastically reducing the drainage capacity and prolonging the residence time of floodwaters inland. As a result, water can remain stagnant for extended periods during and after storms, affecting road access, leaving the community partially isolated. This has direct implications for local livelihoods, food supply chains, emergency access, and the resilience of fisheries-related activities.
161. In response to this compound flood risk scenario, two complementary sub-activities are proposed: **a) Integrated flood mitigation at Lowe Sound**, which will focus on improving hydraulic connectivity, reduce flood duration, and protect critical access routes; and **b) Mangrove Islets**, which are artificial offshore conch and sand dunes or 'islets' covered by planted native mangroves which will reduce or dissipate incoming wave energy and will enhance the shallow water coastal buffer zone, promoting a wide array of ecosystem services. The measures will **directly benefit an estimated 117 highly exposed households comprising 374 residents**, including fisheries-dependent households, small-scale fishers, crabbers and processors, while other users of the access routes and fisheries services will benefit indirectly.
162. This activity has been classified as an **Unidentified Sub-Project (USP)**. This USP corresponds to a "**Partially Unidentified USP – specific location identified**", activity to be determined. The intervention locations and general intervention concepts are known, and preliminary configurations have been developed. However, these configurations have not yet been assessed under detailed hydraulic and hydrodynamic scenarios and may require adjustment. The final configuration and footprint of the interventions therefore remain to be confirmed before their environmental and social risks and impacts can be fully identified and assessed. **USP compliance arrangements:** Once the final configuration and footprint of Activity 2.1.2 have been determined, the activity will be screened and assessed in accordance with the AF Environmental and Social Policy and Gender Policy. Required consultations and environmental and social management measures will be completed and incorporated into the updated ESMP before any physical works commence.
163. Gender and social inclusion perspective: because flood events may disproportionately affect women, integrated flood mitigation measures will directly safeguard their mobility and safety. Restoration of tidal creeks and the strategic planting of native mangroves will consider the possibility of actively recruiting local youth and women's cooperatives, providing them with paid green employment opportunities. The required land and bathymetric surveying phases may map out how localized ponding restricts women specific agricultural access routes. Additionally, all community warning systems and hazard mapping developed will be delivered in fully accessible and highly visual digital formats to ensure equal access during extreme weather events. Works carried out will consider safety and inclusion criteria, which also may be included in the specifications for the contracting of public works companies. The signage will be adequate to inform and raise awareness of the primary care services in the area (medical emergencies, attention to cases of gender violence, etc.), as well as being designed with gender equality and social inclusion criteria. Constructing offshore mangrove islets directly secures the primary landing sites and ecosystem nurseries used by informal and small-scale fishers, crabbers, and female processors. The collection and transport of locally available conch shells and stones for the engineered breakwater cores is an opportunity to actively recruit women and youth. When community-led mangrove planting and maintenance are organized, schedules will offer flexible hours and on-site childcare.

Figure 7. Storm Surge Hazard Map for Lowe Sound – Baseline Scenario 50 yr return period - Source: Smith Warner Intl. 2022



Sub-activity 2.1.2a – Integrated flood mitigation in Lowe Sound

164. Based on field observations, satellite imagery and hazard maps presented in the Baseline Studies[84], the flood problem at Lowe Sound seems to be derived from a combination of multiple causes ranging from climate-related hazards to a high degree of exposure due to a low-lying topography, as well as the adjacent marsh/wetland system surrounding this settlement. Therefore, an integrated approach is proposed to address flood risk at Lowe Sound.
165. However, understanding the actual flood mechanism and interaction between tidal creeks and the sea is crucial to assess properly and identify bottlenecks where corrective actions need to be taken. **Hydrological and hydraulic modelling** needs to be undertaken

[84] Smith Warner. (2022). Climate Change, Met-Ocean, and Coastal Analyses.

specifically for the Lowe Sound shallow lagoonal bay (north) and adjacent wetland (south), considering current topography and tidal creek bathymetry, as well as the culvert crossings at Davey Creek and the raised road (McQueen Street) that connects the main road with the southern part of Lowe Sound. These two have been identified during the site visits as critical points where road overtopping often takes place, and further assessment needs to be carried out.

166. In terms of ecological and environmental impacts, understanding the hydrology and hydrodynamics of the intervention site before initiating restoration activities is essential for identifying appropriate hydrological restoration measures (e.g., removal of barriers to water flow) and re-establishing, to the extent possible, natural hydrological patterns that support tidal exchange and water circulation. Mangrove establishment and survival are highly dependent on hydrological and biophysical conditions (e.g. salinity, soil characteristics, pH) and topography (e.g. elevation).

Figure 8. Tidal Creek and wetland system at Lowe Sound, North Andros - Source: Google Earth satellite imagery



167. The bridge at Davey Creek crossing (see Fig. 8), which is the main and only access route to Lowe Sound by land, is currently undergoing a rebuilding and upgrading process by the Bahamas Ministry of Public Works and Family Island Affairs (MOWFIA), due to the recurrent overtopping of the old structure which left the community inaccessible by land during storm events as well as during the so called 'King Tide', or the highest tide of the year that occurs regularly. The new structure is said to widen the waterway span of the channel crossing (approximately 10.00 m wide), with a single reinforced concrete pier/wall at the center of the channel, and a simply supported roadway slab (raised by about 60 cm with respect to the old structure) which rests above the center pier and a reinforced concrete abutment at each side of the crossing. Minor earthworks will also take place, removing part of the accumulated sediment alongside the channel's crossing. The new bridge at Davey Creek is expected to improve the hydraulic conveyance at this point of the channel, increasing the drainage capacity of the channel and reducing the inland inundation periods at the tidal creek and marsh system. Furthermore, this new and robust structure is believed to reduce the frequency of overtopping due to its raised superstructure (roadway).

168. However, the bridge by itself is not sufficient to mitigate the flood risk at Lowe Sound. These works would become more efficient if coupled with a combination of hybrid green-grey measures targeted at addressing the main flood hazard mechanisms affecting this particular area: storm surge and wind-driven elevated water levels, restricted flow exchange between the marsh and the sea, and prolonged inland ponding after storms. The overall concept is to manage the entire tidal creek and wetland system as a retention and coastal exchange zone, without draining it completely and at the same time improving the ecosystem services. To achieve this, the following measures are proposed:

169. **Restoration and improved connectivity of tidal creeks**. Selective restoration of channels within the marsh is proposed to reconnect the wetland system internally, improving the flow of water between storage zones and the seaward outlets. The intention is not to over-drain the area, but to re-establish strategic flow paths that reduce stagnant ponding and support a more balanced exchange with the sea. This activity will require land surveying or high-resolution LiDAR of a 120-hectare area as well as channel bathymetry, before doing the actual earthworks to deepen and/or connect water flow paths.

170. **Mangrove and riparian vegetation restoration**. Restoration of mangroves and other native wetland plant species along channel margins and marsh edges is included to stabilize sediments, reduce erosion, improve ecological functions, and strengthen the natural buffering capacity of the wetland system. New mangroves and riparian vegetation will be planted strategically along the main flow paths and on identified erosion-prone areas. This measure also supports biodiversity and water quality functions while complementing structural interventions.

171. **Improving hydraulic capacity at channel crossings**. This measure involves upgrading or enlarging the existing crossings which restrict the flow between the wetland and the sea. Two critical points were identified: one is Davey Creek, which is currently undergoing an upgrade by the Ministry of Works, and the other is at the channel crossing raised embankment roadway (McQueen St.) over the west tidal creek. Along this 170-meter-long road section there are a total of seven double barrel ~600mm pipe culvert crossings. Replacing these culverts with 1,200 mm pipes would double the drainage capacity of these culvert crossings, or even replacing these seven double barrel culverts by box culverts would increase even more the conveyance, improving the water flow and eventually the marsh and sea exchange.

172. The expected outcome of this integrated approach is a more resilient coastal-wetland-infrastructure system in which floodwaters can be temporarily stored, exchanged, and drained in a more controlled way, while critical infrastructure and access routes remain functional for longer and recover more rapidly after storms. Reduced frequency and duration of road overtopping is likely to reduce the risk of community isolation; improved hydraulic connectivity and drainage capacity will also reduce prolonged post-storm ponding; and finally, the overall ecological condition of the wetland and tidal creek system is expected to improve, fostering a range of ecosystem services including sediment stabilization and flood water retention.

Sub-activity 2.1.2b – Mangrove Islets

173. Lowe Sound's shoreline is among the most storm surge–exposed areas in Andros, with inflows converging from two directions. To address this, the IDB-financed ICZM Project is supporting mangrove planting in the settlement. However, baseline studies confirm that planting alone is insufficient: without engineered substrates to anchor them, mangroves will not survive high-energy storm events. This project therefore introduces complementary financing for the construction of a preliminary chain of eight offshore mangrove islets (engineered cores of conch shell, stone, gravel, and sand (along with other locally source materials[85]) placed 120 m offshore in a chain of eight breakwaters and planted with approximately 3,000 native mangrove seedlings. Conch shells are widely available throughout Lowe Sound given that it is one of the main seafood product extracted here and therefore is considered as one of the core materials for the islets, along with locally sourced rocks and stones which will altogether provide a solid foundation for

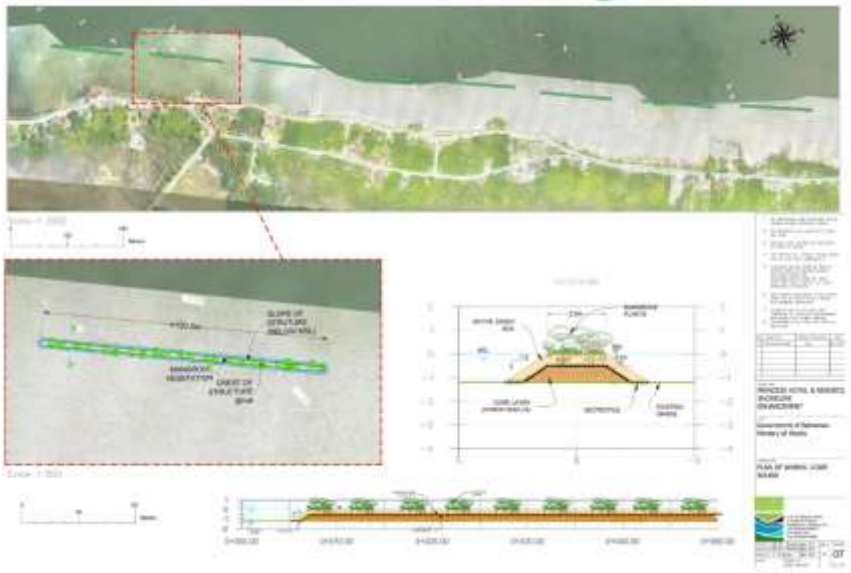
[85] For example, the Project could repurpose dredged sediments from Davey Creek, provided that sediment quality testing confirms that the material is uncontaminated and safe for reuse. The analysis should assess the physicochemical characteristics of the dredged sediments.

these structures. Once planted and maintained, the mangroves will grow into a living barrier that dissipates wave energy, reduces storm surge flooding, and restores habitat for key fisheries species. Figure 9[86] shows a (preliminary) design of what these artificial hybrid breakwater structure could look like, consisting of eight artificial islets (150 meters long by 5 meters wide) built from a conch and rip-rap layer acting as the core structure, covered by a geotextile and finished with a 0.50-meter-thick layer of native sand where mangroves will be planted. The crest level should match the water level at high tide, leaving these islets be fully submerged with only the mangrove trees above the mean water level (average water depth at the proposed site is about 1.00 meters).

174. Design readiness: Detailed baseline studies and preliminary designs for the Lowe Sound interventions have already been completed under the IDB-funded Climate-Resilient Coastal Management & Infrastructure Program. The preliminary engineering concepts for both the deepening of the Davey Creek channel and the construction of offshore mangrove islets have been validated, subjected to extensive stakeholder consultations, and formally accepted by both national agencies and community stakeholders. During the initial implementation stage, the project will undertake the necessary wave and hydrodynamic modelling, environmental and social assessment, stakeholder consultation and detailed engineering. This process will validate or refine the proposed configuration and integrate the resulting environmental and social requirements into the final design and procurement specifications. No physical work will be procured or initiated until these studies, assessments, consultations, designs and required approvals have been completed.

175. This integration ensures that the ecological functions of mangroves are secured and provides immediate and long-term flood risk reduction.. For Lowe Sound—where households depend heavily on fisheries for food and income—this combined grey–green approach protects critical landing sites, maintains connectivity for food distribution, and sustains the ecosystems that underpin marine productivity. By reducing exposure to surge and safeguarding fisheries-dependent livelihoods, these interventions directly enhance the resilience of Andros' food systems.

Figure 9. Sketch of approximate location and typical cross-section of the mangrove islets Source: Smith Warner International Limited, 2022



Component 3: Support services for farmers, fishers and value chain actors

Outcome 3: Adaptive capacities of farmers, fishers and food system actors strengthened for climate-resilient production, value addition and market access

Output 3.1: Climate-resilient training, innovation and producer support services established for farmers, fishers and food system actors

176. This output will strengthen the **adaptive capacity, innovation uptake, and market integration** of food system actors in Andros to enhance food security under climate change. Through the delivery of climate-resilient skills and tailored training programmes (Activity 3.1.1), the establishment of an inclusive innovation hub (Activity 3.1.2), the provision of targeted support for the adoption of climate-smart technologies and practices (Activity 3.1.3), and the development of transparent and resilient market systems (Activity 3.1.4), the project will enable producers to translate knowledge into practice. These interventions will reduce vulnerability to climate and market shocks, improve productivity and incomes, and support the scaling of climate-resilient food systems across the Family Islands.

Activity 3.1.1: Delivery of Climate-Resilient Skills and Capacity Development for Food Systems

177. This activity will support the **design and delivery of a practice-oriented training programme** to strengthen the adaptive capacity of food system actors in response to climate change, covering the full value chain, from input supply and production to post-harvest handling, processing, marketing, and business management.

178. The training will be **aligned with the operational needs of the SPMF and climate-related challenges**, equipping producers, processors and service providers to manage climate risks, reduce losses, and maintain product quality under changing conditions.

179. The programme will combine **on-site practical training (field-based)** with **online and classroom-based modalities**, responding to stakeholder preferences and circumstances. It will focus on hands-on, immediately applicable skills, including:

- climate-resilient production systems and crop selection;
- water and drought management;
- heat stress management for crops and workers;
- resilient post-harvest/post-production handling and preservation and processing;
- agribusiness, market access, and financial management.

180. **At least 4 targeted assessments** of priority value chains will be conducted to identify suitable technologies, value-added opportunities and resource-efficient practices (e.g. water, energy and waste management), ensuring that training is tailored and

[86] Smith Warner. (2024). *Final Project Report.*

relevant to each sector.

181. Training content will be tailored to local needs and risks and may include **practical toolkits or small-scale solutions that participants can apply directly**. Project will incorporate bottom-up and top-down capacity building, at sectoral and community levels, as often there is a lack of capacity at both government and farm levels as an obstacle or challenge in adopting resilient practices and technologies.
182. A **flexible and inclusive delivery model** will be adopted, engaging government agencies, academic institutions (e.g. BAMSI), cooperatives, civil society organizations and other technical partners. Training providers will be selected during implementation to ensure the best fit for each topic.
183. A **training-of-trainers** program will prepare at least 50 local trainers, extension workers and community facilitators; this approach will support sustainability, enabling local institutions and community actors to continue delivering training beyond the project duration. The program will be **inclusive, targeting women, youth and new entrants** to strengthen workforce renewal and diversification.
184. Gender and social inclusion perspective: To ensure equitable and inclusive access, the capacity development program will encourage and support a 50% participation rate for women and youth. The flexible delivery model will explicitly feature decentralized, open-schooling, and low-bandwidth online distance-learning modalities through BAMSI to overcome the physical isolation between Andros's four districts. Workshops and field sessions will be scheduled during school hours or adjusted around women's caregiving duties, with dedicated financial resources and support allocated for on-site childcare during long sessions. The training content on heat stress management and post-harvest handling will directly address the occupational risks identified among female processing workers and support informal, unregistered female vendors in stabilizing market-relevant crops. Furthermore, business management and financial literacy modules will actively target female farmers and crabbers, providing them with the necessary credentials to bypass traditional credit barriers and access formal safety nets, while the training-of-trainers approach will include GESI-related modules.

Activity 3.1.2: Upgrade the BAMSI Research and Model Farm into a Climate-Smart Agriculture, Aquaculture, and Fishery (CSAAF) Innovation Hub for climate-resilient technologies, training, and applied learning

185. This activity will support the upgrade of the BAMSI Research and Model Farm in North Andros into a Climate-Smart Agriculture, Aquaculture and Fisheries (CSAAF) Innovation Hub, serving as a living demonstration and applied learning site for integrated, climate-resilient food systems. **The Hub will directly serve at least 300 users**, including farmers, fishers, students, extension workers, entrepreneurs, processors and other food system actors from Andros.
186. The Hub will showcase and test a range of **innovative, climate-adapted production systems and technologies**, many of which were identified and prioritized through stakeholder consultations, including engagement with farmers, fishers, and youth. These will include, among others:
    - climate-resilient crop systems and diversification;
    - water management solutions, including rainwater harvesting, irrigation systems, desalination, and water reuse;
    - hydroponics, aquaponics, and other water-efficient production systems;
    - sustainable aquaculture and fisheries practices;
    - innovative cooling, storage, and post-harvest technologies to reduce losses under heat stress;
    - digital and smart agriculture tools, including data-based farm management systems;
    - drone-based applications for monitoring, mapping, and precision agriculture;
    - renewable energy-integrated systems, including solar-powered production and agrivoltaic approaches;
    - circular approaches, including composting and resource reuse;
    - modular and high-efficiency production systems, enabling intensive, small-scale farming models suited to local conditions and new entrants.
187. The Hub will operate under a **farming field school approach**, combining demonstration plots inside and outside of BAMSI Facility, hands-on learning, and applied experimentation, allowing farmers, fishers, students and trainees to test solutions under real conditions. Participation will be open not only to BAMSI students, but also to farmers, fishers and other food system actors in Andros, ensuring broad access to innovation and practical learning.
188. In addition, the Innovation Hub will function as a practical training and innovation platform, closely linked to Activity 3.1.1, where participants can apply skills in climate-resilient production, processing, business development, and market-oriented approaches. It will also demonstrate **financially viable models** for climate-smart enterprises.
189. The Hub will be designed to **respond to key climate risks and operational challenges identified in Andros**, particularly those related to water constraints, heat stress, limited infrastructure, and the need to modernize and attract new entrants, especially youth, into the agrifood system and main value chains.
190. Gender and social inclusion perspective: the modernization of this facility into a CSAAF Innovation Hub may support a targeted recruitment and scholarship strategy guaranteeing equal access for women and youth. The hub's farm field school model will explicitly document and scale the crop diversification and drip irrigation innovations already pioneered by local female farmers, providing them with academic validation and leadership opportunities as peer instructors. The hub's applied learning tracks may offer modular, short-course options and flexible participation arrangements to accommodate women with caring responsibilities. Physical demonstration sites will incorporate universal designs principles to ensure accessibility for persons with disabilities.

Activity 3.1.3: Establishment of a Climate-Resilient Food System Support Window for Producers

191. This activity will establish a dedicated support window to enable farmers and fishers to adopt and scale climate-resilient practices and technologies in their operations, addressing key barriers identified during stakeholder consultations.
192. The activity will provide in-kind and small grant-based support packages, **expected to benefit at least 150 farmers, fishers and producer-led MSMEs**, prioritizing vulnerable and small-scale producers, to facilitate the uptake of adaptation measures, improve productivity, and strengthen livelihoods under changing climate conditions. Additionally, it is estimated that an additional 150 stakeholders including farmers, fisherfolk, entrepreneurs, processors and other users will participate in training and demonstration sessions in farming field schools in the upgraded Hub.
193. This activity has been classified as an Unidentified Sub-Project (USP). This USP corresponds to a **"Partially Unidentified USP – specific activity identified, location to be determined".** The types of eligible investments and general eligibility criteria have been defined; however, the specific beneficiaries, land parcels and site locations for each supported investment remain to be determined during project implementation.

194. The support window will operate through a transparent and accessible selection mechanism, ensuring equitable access and alignment with project objectives. Support will be directly linked to the adoption of climate-resilient practices, participation in training programs (Activity 3.1.1), and engagement with the Innovation Hub (Activity 3.1.2).
195. Eligible investments will include a range of climate adaptation and productivity-enhancing measures, based on priorities expressed by communities, including:
    - Small-scale water management systems, including efficient irrigation equipment, water storage and pumping solutions (e.g. solar-powered pumps);
    - shadehouses (greenhouses) and small-scale climate-protective structures to reduce heat stress and improve crop resilience;
    - access to climate-resilient seeds and planting materials;
    - small-scale cooling, storage, and post-harvest equipment to reduce losses;
    - fishing equipment and gear, including shared or collective assets, to improve productivity and resilience;
    - Small-scale on-farm and near-farm infrastructure and equipment to support production, aggregation, and value addition;
    - other locally appropriate small-scale climate-smart technologies and inputs, including those demonstrated through the Innovation Hub and that are consistent with the Category B project. Appropriate screening will be conducted to ensure compliance.
196. The activity will also promote productive water use and climate-adapted farming systems, ensuring that supported investments contribute directly to reducing vulnerability to drought, heat stress, and climate variability.
197. By linking access to production inputs and equipment with training, innovation, and market-oriented interventions, this activity will enable at least 300 producers to translate knowledge into practice, reduce operational risks, and improve income opportunities.
198. This activity will establish a practical and scalable mechanism to accelerate adoption of climate-resilient solutions, strengthen livelihoods, and support the transition towards more resilient food systems in Andros and across the Family Islands.
199. To maximize the sustainability and long-term benefits of project investments, infrastructure and site-specific interventions will, to the extent feasible, be implemented on Crown Land or privately owned land where legitimate ownership, lease agreements, or other recognized land-use rights can be demonstrated.
200. **USP compliance arrangements:** Once the specific land parcels and site-level investments under Activity 3.1.3 have been determined, each investment will be screened and assessed in accordance with the AF Environmental and Social Policy and Gender Policy. Required consultations with beneficiaries and affected communities, and any necessary environmental and social management measures, will be completed and incorporated into the updated ESMP before the corresponding in-kind or grant-based support is disbursed or implemented.
201. Gender and social inclusion perspective: To ensure this support window reaches women farmers and fishers, women- and youth-led enterprises, and other vulnerable groups, the grant and in-kind selection mechanism will avoid relying exclusively on traditional financial requirements that often exclude marginalized applicants, such as credit histories, collateral or conventional guarantees. However, applicants will be required to demonstrate legal or formally recognized access to the land, productive assets or activity supported, in line with national requirements. Application pathways will be simplified through inclusive formats and tailored technical assistance where needed. The window may prioritize investments for vulnerable and marginalized groups, including women and youth-led enterprises.

Activity 3.1.4: Develop resilient market access mechanisms and value chains for climate-resilient fisheries and agricultural products

202. This activity will support the development of **climate-resilient and market-responsive value chains** for agricultural and fisheries products, addressing key constraints in market access, logistics, pricing, and commercialization identified during stakeholder consultations. **The activity will directly benefit at least 150 producers, fishers, processors, vendors and other food-system MSMEs**, with indirect benefits for consumers and buyers through more reliable supplies of local products.
203. The activity will strengthen linkages between producers, processors, aggregators and buyers, while supporting the formation and strengthening of producer collective enterprise models (e.g., cooperatives, producer organizations, fisher associations, aggregation groups, and other collective business arrangements). Stakeholder consultations highlighted that many producers operate individually and that existing producer organizations have limited capacity, constraining aggregation, collective marketing, and bargaining power. The activity will help producers organize into stronger collective structures that can improve market access, climate resilience, and income opportunities**,** ensuring that climate-resilient production translates into **stable and fair income opportunities**.
204. Key actions will include:
    - **Facilitation of at least six multi-stakeholder and B2B dialogues** to co-design practical solutions for aggregation, distribution and market coordination;
    - **Development of one basic and transparent market and pricing mechanism**, aligned with market conditions, including basic price monitoring systems to allow producers to benchmark prices and improve bargaining power;
    - **Strengthening of at least three aggregation systems**, linked to the SPMF, to reduce losses and improve market access under climate constraints;
    - **Establishment of at least four market linkages and off-take arrangements**, to improve demand predictability and reduce market risk;
205. **Improvement of post-harvest handling, cold chain and logistics interfaces**, reducing losses linked to he**t least 3 policies, planning or investment dialogue sessions** tat, delays and climate variability;
    - **Strengthening of one transparent transaction and payment system**, ensuring timely and reliable payments, addressing key concerns raised by producers.
    - **Support the formation and strengthening of producer collective enterprise models** through organizational development, governance strengthening, leadership training, business planning, and collective marketing arrangements linked to the SPMF, including, where appropriate, facilitating access to finance through engagement with established credit unions and other financial institutions.
206. This activity will be closely linked to the SPMF (Component 2) and to investments in production and innovation (Component 3), ensuring that climate-resilient practices are supported by functional and reliable market systems. Producer-led aggregation systems and producer collective enterprise models will help improve the utilization, sustainability, and long-term viability of the SPMF and associated value-chain investments.
207. Gender and social inclusion perspective: this activity presents the opportunity to strengthen Andros's women economic autonomy

concentrated in the commercial side, marketing directly to Nassau and running informal value chains. Transparent pricing mechanisms and price monitoring systems will be designed to increase the bargaining power of informal, unregistered female vendors and crabbers. The strengthening of aggregation and transaction systems linked to the SPMF will feature low-barrier, simplified vendor registration pathways, ensuring that households that are female-headed are not excluded due to a lack of formal land tenure or credit history. Furthermore, multi-stakeholder and B2B dialogues may implement a minimum 40% quota for female and youth participants, scheduling these business sessions around domestic caregiving duties and access restrictions.

Component 4: Knowledge management and learning

Outcome 4: Knowledge management and learning systems strengthened to support climate-resilient food system decision-making and scaling

Output 4.1: Knowledge sharing, learning exchanges, and multi-stakeholder dialogue facilitated to strengthen climate-resilient food systems

208. This output will facilitate the **generation, systematization, exchange, and dissemination of knowledge** to support the adoption and scaling of climate-resilient practices across food systems in The Bahamas. Through the development of an integrated climate information system (activity 4.1.1), the systematic documentation of lessons learned and the development of multimedia knowledge products (Activity 4.1.2), combined with structured peer-to-peer learning, island-to-island exchanges, and regional dialogue (Activity 4.1.3), the project will enable stakeholders to learn from practical experience. Together, these efforts will strengthen the **information availability** on climate resilient food systems, **awareness, capacity, and collaboration**, accelerating the uptake of climate-resilient solutions from Andros to other Family Islands and beyond.

Activity 4.1.1: Improve information exchange on climate-related risks for climate-resilient food system across food sector stakeholders

209. This activity will enhance the generation, management, and exchange of climate-related information to support decision-making across food system stakeholders in Andros, while establishing the basis for scaling to other Family Islands. The climate information system and its communication channels will be made available to all relevant government institutions and food-system stakeholders in Andros.
210. The activity will develop a unified, centralized, and integrated climate information system, combining:
    - a **government-facing (potentially GIS-based) platform** to manage data on climate risks, hazards, soil, and food system vulnerabilities; and
    - a **stakeholder-facing set of communication channels**, differentiated by audience: a centralized digital interface for technical and government users; and accessible, low-bandwidth channels for farmers and fishers (including dedicated social media channels, WhatsApp, and radio communications with visual references), ensuring actionable information reaches all users regardless of connectivity or digital literacy levels.
211. The two platforms will be interoperable, allowing continuous data exchange and updates. The project will train at least 20 designated technical staff to manage and update both systems beyond the project's lifetime, ensuring long-term sustainability).
212. In addition, the activity will include:
    - a knowledge repository with technical resources and guidelines;
213. exploration of digital tools (e.g. crop scheduling or advisory applications) to support climate-informed production decisions; and , whose National Environmental and Agricultural Performance Information System (NEAPIS) already covers environmental monitoring, agricultural production, and food security data relevant to this project. Complementarity and data-sharing arrangements with NEAPIS will be explored to avoid duplication and strengthen the overall national climate information architecture.
214. Maintenance and updating responsibilities will be assigned to designated government counterparts. This will be confirmed during the Full Proposal stage in consultation with the relevant institutions.
215. This activity will improve the availability, accessibility, and practical use of climate information, supporting more resilient and informed food system planning and decision-making.
216. Gender and social inclusion perspective: The climate information system and its interfaces will be designed to overcome the specific digital, educational, and time barriers faced by women, youth, and persons with disabilities (PWDs). The stakeholder-facing interface and mobile applications will utilize accessible, low-bandwidth, and simplified and inclusive visual formats. Additional information channels can be used to reach broader range of stakeholders, including sharing information via television and radio alerts, text messages, or others[87]. The knowledge repository may document and promote the localized climate-smart innovations led by female farmers, such as crop diversification and drip irrigation. To bridge the physical separation between rural districts, information exchange mechanisms will integrate distance-learning tools and networks.

Activity 4.1.2: Generate evidence and lessons learned of the Project

217. This activity will support the systematic generation, documentation, and communication of evidence and lessons learned from the implementation of project interventions in Andros. U**nique project participants, implementers and institutional stakeholders will contribute to or directly use the evidence generated through targeted learning and planning processes.**The activity will include:
    - **Collection and analysis of data** on technical, operational, and institutional performance of project activities;
    - **Documentation of good practices, challenges, and lessons learned through at least five case studies or good-practice notes**, with a focus on identifying scalable and replicable solutions;
218. **Development of multimedia knowledge products**, including short videos, radio stories, visual case studies, illustrated field reports and storytelling materials in multiple formats (digital and non-digital), to capture practical experiences and facilitate wider dissemination across audiences with different levels of connectivity and digital literacy;
    - **Integration of lessons learned into planning processes**, including inputs to the Food Systems Master Plan and national adaptation processes (e.g. NAP).
219. All this information on lessons learned, and the data collected for evidence generation at the Project level will be integrated into a

[87] For example, the AccessAbility Bahamas app, designed to protect communities from disasters by providing a range of services including alerts, sign and translator services, access to emergency services. UNDP (2023). *We can replace things, but we can't replace people: protecting lives through inclusive early warning systems in the Bahamas*.

digital system, to be developed at the start of Project Implementation.

220. This activity will generate a robust and accessible evidence base, translating project experience into practical knowledge to support scaling and long-term adaptation planning.

221. Gender and social inclusion perspective: identify case studies and good practices to be documented and lessons learned regarding women and youth participation in project's activities in Andros. Capture the distinct adaptation strategies of women, youth, and informal worker and documented lessons explicitly highlighting the localized climate-smart innovations led by local female farmers, alongside ancestral knowledge from small-scale producers. To ensure equitable participation, data-gathering methods will use accessible formats tailored for people with disabilities. Take specific gender and inclusion considerations into account when selecting and analyzing all case studies and documenting experiences. All multimedia knowledge products will include data disaggregated by sex and age and will highlight the experiences of women as key participants. Furthermore, they will be prepared using inclusive language and visual elements free from gender bias, as well as images that represent men and women, young people and adults, and persons with disabilities equally.

Activity 4.1.3: Awareness raising, knowledge exchange and dissemination at a local, national and regional level.

222. This activity will support structured knowledge exchange, peer learning, and dissemination, to promote adoption and scaling of climate-resilient practices across food systems. At least 250 farmers, fishers, processors, students, extension workers and other food-system actors will participate directly in targeted knowledge-exchange and awareness activities.

223. The activity will include:

- **At least 6 regular knowledge exchange and peer-to-peer learning activities** (e.g. field visits, workshops, farmer-to-farmer exchanges), conducted multiple times per year and focused on farms and communities implementing innovative practices;
- **At least 3 island-to-island exchanges within The Bahamas**, including with Family Islands such as Eleuthera and Long Island, where agricultural systems already operate under more water-constrained and climate-stressed conditions, providing relevant lessons for future scenarios in Andros;
- **At least 2 regional knowledge exchanges**, including engagement with practitioners from other Caribbean countries (e.g. Guyana, Haiti) to share practical experience in climate-smart and nature-based agricultural approaches;

224. **Awareness-raising and dissemination activities**, including one communication campaign and up to 10 knowledge products tailored to farmers, fishers and local communities; along with awareness campaign to promote the production and consumption of a wide variety of fruits and vegetables at school, home and in the community.

225. **Engagement with national institutions and stakeholders** will include **and** promote the uptake of lessons learned into policies, planning processes, and investment decisions.

226. This activity will strengthen the exchange and application of practical knowledge, enabling stakeholders to learn from real experience and accelerating the adoption and replication of climate-resilient solutions across The Bahamas and the wider Caribbean. One final dissemination and scale-up event will present project results, technologies, lessons and replication opportunities to local, national and regional stakeholders.

227. Gender and social inclusion perspective: To ensure equitable knowledge exchange and peer-to-peer learning activities, the project will encourage equal gender representation in all farmer-to-farmer exchanges and field visits, explicitly scheduling them around the caregiving duties of female-headed households. Awareness campaigns and communication products will be delivered in simplified and highly visual digital formats to directly reach informal, unregistered female and youth producers who lack access to formal networks, leaving no one behind. Engagement activities with national institutions will include GESI dedicated sections.

B. Describe how the project/programme provides economic, social and environmental benefits, with particular reference to the most vulnerable communities, and vulnerable groups within communities, including gender considerations. Describe how the project/programme will avoid or mitigate negative impacts, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

228. The project is expected to generate economic, social, gender and environmental benefits with equitable access for vulnerable communities, households and individuals. It will reach an estimated 1,000 unique direct beneficiaries in Andros (with an indicative project-level target of 50% women)[88] and approximately 125,000 (52% female) indirect beneficiaries in The Bahamas[89], including vulnerable food-system actors and households beyond the immediate intervention sites. For aggregation purposes, the direct beneficiaries are organized into three non-overlapping groups to avoid double counting: i). 555 food system actors, including small-scale farmers and fishers, entrepreneurs, members of producer associations and workers in MSMEs that will receive training or benefit from climate-resilient productive infrastructure, improved processing and market-access services, climate-smart agriculture and fisheries practices, innovation support and community-based adaptation under Activity 2.1.1 and Component 3;ii). 299 additional residents of Lowe Sound, a high climate-risk area, through coastal protection measures under activity 2.1.2 that reduce exposure to storm surge, tidal flooding and coastal erosion; and iii) 146 additional people who will participate in awareness-raising, knowledge-exchange and dissemination activities under Component 4 without participating in other project activities. While the three groups are mutually exclusive for aggregation purposes, many direct beneficiaries are expected to participate in, and benefit from, more than one project activity. Indirect beneficiaries will benefit from more reliable local food supply, reduced disruption of agricultural and fisheries value chains, strengthened ecosystem-based coastal protection, and more resilient services and infrastructure supporting livelihoods and food security. As Andros is the primary agricultural frontier for Nassau, increased food production delivered via inter-island logistics will enhance food availability and price stability for consumers during climate shocks. Furthermore, the project is expected to reduce post-harvest and post-catch losses by approximately 40%, while climate-proofing and upgrading one productive

[88] **Direct beneficiaries** were preliminarily estimated by considering individuals intentionally targeted by project activities and expected to receive high-intensity benefits. Activity-level estimates were consolidated using provisional overlap assumptions reflecting the expected participation of the same individuals in multiple activities. Therefore, the project-wide target refers to unique beneficiaries rather than the sum of all activity-level participants: individuals expected to benefit from more than one activity are counted only once. These assumptions will be validated and refined at FP stage through stakeholder consultations, beneficiary mapping, finalization of activity design, and activity-level registration.

[89] **Indirect beneficiaries** were preliminarily estimated as people expected to receive broader, medium-intensity benefits such as food-security, value-chain, institutional and ecosystem-service benefits without being individually targeted by project activities. The estimate comprises the remaining population of Andros after excluding the direct beneficiaries, plus a percentage of the population of New Providence, derived using a food-supply chain proxy methodology. Population figures are based on the Bahamas National Statistical Institute's 2022 Census of Population and Housing.

facility for resilient aggregation, processing, storage and market access. Beneficiary estimates, baselines, targets and disaggregation categories will be refined during the next formulation stage through consultations, technical assessments, further development and validation of the initial gender assessment, environmental and social analysis, and the project results framework.

229. **Economic Benefits of the Project:** Under Component 1 and 4, climate-informed knowledge products, risk and vulnerability studies, information-exchange mechanisms and the Climate-Resilient and Sustainable Food Systems Master Plan will help institutions and food-sector actors prioritize adaptation investments, avoid inefficient or maladaptive spending, and scale successful models to other Family Islands. Under Component 2, the climate-proofed SPMF will reduce disaster-related income losses and strengthen income stability for 370 producers, create job opportunities for women and youth through new permanent jobs linked to SPMF operation, maintenance, processing and logistics, shorten value chains reduce disruptions to business operations following storms, flooding, and power or transportation outages, reduce dependence on New Providence, and increase the share of product value retained by Andros-based producers and MSMEs. Lowe Sound's green-grey coastal protection measures will reduce exposure of 117 households, including fishing families, landing sites, market routes and distribution links to storm surge, flooding and erosion, avoid damage, reduce recovery costs, indebtedness and asset depletion for communities and public authorities; while generating temporary construction jobs. The scale of these potential avoided losses is illustrated by Hurricane Matthew: documented impacts included USD 399,025 in damage from Lowe Sound Primary School alone, while fisheries damage in North Andros reached USD 665,500, with a further USD 300,858 in income losses during the three months following the hurricane. Under Component 3, the project will strengthen skills, innovation systems and market linkages for climate-adapted agriculture, aquaculture, fisheries and nature-based livelihoods, reducing adoption barriers, supporting income diversification and improving producers' capacity to maintain or increase income despite climate and market disruptions. Under Component 3, in-kind funding will be provided to 150 producers and enterprises to adopt climate-resilient technologies, practices, equipment, and business solutions, and additional 275 food-value-chain actors will receive enhanced training and technical support, which will sustainably increase productivity. Together, these investments are expected to reduce post-harvest and post-catch losses by approximately 40% relative to the baseline among supported value chains, increase local processing and cold-storage capacity, and improve operational and market-access continuity during heatwaves, power outages and transport disruptions and contribute to reducing national dependence on food imports and decrease the fiscal burden associated with import reliance.

230. **Environmental benefits:** The project will generate environmental benefits through green-grey nature-based solutions, climate-proofed productive infrastructure and climate-resilient agrifood practices. In Lowe Sound, investments will help restore natural hydrological patterns of the creek and associated systems, improving habitat connectivity, tidal exchange and water quality. At CN stage, the indicative intervention concept includes the potential construction of up to eight mangrove islets and the planting of up to 3,000 native mangroves, subject to the findings of the hydrodynamic, ecological and engineering assessments to be conducted at FP stage. In addition, approximately 120 hectares will be assessed and mapped to characterize existing habitats, hydrological conditions, erosion and flood-risk patterns, and opportunities for improved ecological connectivity. These measures will enhance mangrove ecosystem services, including fish nursery habitat, food and shelter for marine and terrestrial fauna, coastal flood and erosion protection, and carbon sequestration. The project will also reduce food loss and waste through improved processing and transformation, strengthen planning, zoning and vulnerability mapping, and support farmers and fishers to adopt climate-resilient technologies and practices that improve soil health, organic matter, water retention and conservation, nutrient cycling and biodiversity.

231. **Social Benefits:** The project will strengthen food security in Andros and contribute to national food security for a approximately 126,000 inhabitants by improving food-system infrastructure, reducing post-harvest and post-catch losses, protecting infrastructure and 117 fisheries-dependent households, and promoting climate-smart agriculture, aquaculture and fisheries for 555 food-system actors. This will improve continuity of local food supply, reduce the social impacts of storms, flooding, saline intrusion and market disruptions, and strengthen recovery capacity across agro-fisheries value chains. Particular attention will be given to women, youth, low-income households, elderly persons, persons with disabilities and other groups with limited adaptive capacity through targeted outreach, accessible consultations, inclusive training, producer and fisher networks, business and financial skills development, and participation in decisions related to project-supported infrastructure and services. By reducing food loss and strengthening supply chains, the project will improve access to affordable, safe and nutritious food, while indirectly promoting healthier and more sustainable diets by reducing reliance on highly processed imported foods and supporting fresh, local and traditional food sources.

232. Under Component 1 and 4, the project will strengthen social inclusion, community organization, local governance and gender-responsive adaptation planning by ensuring that knowledge products, learning exchanges, the MEL system and the Master Plan reflect the needs and priorities of vulnerable food-system actors. Under Component 2, the SPMF will provide shared, climate-resilient aggregation, processing, storage, value addition and market-access services to approximately 370 producers and other food-value-chain actors, while Lowe Sound's coastal protection measures will help protect 117 homes, landing areas, access roads, livelihoods, physical and mental health, and local food-distribution functions. These measures are expected to reduce displacement and recovery pressures following storms and flooding and improve the continuity of access to livelihoods, markets and essential community functions. Under Component 3, at least 425 food-value-chain actors will receive enhanced training and technical support, including 150 producers and enterprises will receive in-kind support to adopt climate-resilient technologies, equipment, practices and business solutions. In this way, training, innovation, peer-to-peer learning and practical support will strengthen adaptive capacities, producer and fisher organization, technology adoption, food security, nutrition, income generation and the participation of women and youth in climate-resilient enterprises and local adaptation leadership.

233. **Gender benefits of the Project:** The project's preliminary gender-responsive approach is informed by the initial gender assessment included in Annex I. A detailed Gender Action Plan (GAP) will be developed during FP preparation to enhance the climate resilience and economic autonomy of women, youth and vulnerable groups in Andros by addressing barriers to participation, finance, training, infrastructure, services and decision-making. It will promote simplified registration and grant mechanisms that avoid relying exclusively on traditional financial requirements such as credit histories, collateral or conventional guarantees, while requiring applicants to demonstrate legal or formally recognized access to the land, productive asset or activity supported. Flexible training schedules, distance-learning modules, inclusive digital formats, targeted technical assistance and, where relevant, childcare or care-support measures will facilitate equal participation. Labor-saving and heat-reducing technologies, such as automated irrigation, solar-powered pumps, shade houses, post-harvest cooling and improved ventilation, will help reduce women's time poverty, physical labor burdens and occupational heat-stress risks.

234. Under Component 1 and 4, the GAP will guide gender-responsive CRVA methodologies, with data and vulnerability profiling disaggregated by sex, age and disability, and will ensure that climate information systems and knowledge products are accessible,

inclusive and responsive to literacy, connectivity and time barriers. The Master Plan will support pathways for the registration and recognition of female farmers, crabbers and vendors, improving access to credit, insurance and professional networks, while promoting gender-responsive governance and infrastructure standards. Under Component 2, the GAP will support gender-responsive infrastructure, reduce labor-intensive disruptions through solar energy and rainwater harvesting, and promote paid green employment for women's cooperatives and youth in mangrove restoration and tidal creek recovery. Under Component 3, the project will deliver capacity building, financing, innovation and market-access support, including flexible and decentralized training, gender-sensitive technical assistance, scholarships, support to women-led innovations, prioritization of vulnerable groups through the Climate-Resilient Food Systems Support Window, collective or shared asset ownership, transparent pricing, aggregation systems, simplified registration pathways and inclusive business dialogues.

235. The project is not expected to generate negative development outcomes or maladaptation, nor to increase the vulnerability of beneficiaries or non-beneficiaries. Interventions are designed to reduce existing climate risks by strengthening adaptive capacity, resilient food-system infrastructure, ecosystem-based adaptation and climate-informed planning. Infrastructure and productive investments will be guided by climate risk assessments, land-use considerations, community consultations, and environmental and social safeguards to avoid creating new exposure, excluding vulnerable groups or increasing pressure on natural resources. Coastal protection and ecosystem-based measures will reduce existing risks without encouraging settlement or productive expansion in high-risk areas, while fisheries and livelihood support will be aligned with sustainable resource management principles. Inclusive access arrangements, gender-sensitive participation, monitoring and grievance mechanisms will help ensure that adaptation benefits are equitable, sustainable and do not undermine future adaptive capacity.

C. Describe or provide an analysis of the cost-effectiveness of the proposed project/programme.

236. The Project adopts a cost-effective approach that integrates mutually reinforcing activities by combining targeted physical investments, nature-based solutions, shared productive infrastructure, and soft measures related to planning, capacity building, MEL, and knowledge management, ensuring sustainability and effective implementation. The selection of the scope and prioritized alternatives responds to criteria related to life-cycle efficiency, operational sustainability, adaptation benefits, and environmental and social impacts, investment and O&M costs, local adoption feasibility, and comparison with alternative adaptation options and the business-as-usual (BAU) scenario. The project design also builds on existing national and international capacities and experiences, as well as established community structures, thereby reducing start-up and coordination costs while improving O&M sustainability, adoption, and continuity. Instead of financing isolated interventions, the Project structures its components in a complementary manner, allowing them to jointly address climate hazards in the project area: Component 1 generates the information, capacities, and instruments needed to guide climate-informed decision-making; Component 2 reduces physical risks and strengthens local risk management capacities; and Component 3 reduces the sensitivity of agro-fishery livelihoods through shared infrastructure, livelihood diversification, and the strengthening of resilient value chains. Component 4 systematizes and shares lessons learned to facilitate the replication of successful and cost-effective measures.

237. The activities under Component 1 and 4 are mainly soft measures with relatively low costs and high enabling value. They include vulnerability and climate risk studies for the food system, the development of the Climate-Resilient and Sustainable Food Systems Master Plan as a planning instrument, interinstitutional coordination through a shared information system, integration of the Project's MEL system with national plans, and the systematization of good practices and knowledge management. These actions are cost-effective because they reduce the risk of misplaced, duplicated, or unsustainable investments, and allow the activities under Components 2 and 3 to be designed and operated based on climate evidence, community priorities, and sustainability criteria. Under the BAU scenario, decisions on production, infrastructure, and natural resource use would continue to be made with fragmented information and limited consideration of projected climate risks. In contrast, the Project generates institutional and community capacities that will remain beyond the implementation period. Likewise, the MEL system and learning activities will facilitate the replication and scaling up of the most effective measures in other communities across Andros, New Providence, and the Family Islands.

238. The project includes activities classified as USP because the exact investment has not yet been defined (Activity 2.1.2) or specific location has not been determined (Activity 3.1.3). However, the technologies identified for implementation in previous studies have been evaluated in this analysis as the most cost-effective alternatives. Efforts will be made during the budgeting phase to prioritize the investment, but if the USP activities remain in the implementation phase, the project will ensure budgeted processes for cost assessment, feasibility, long-term sustainability, and alignment with national and local implementation capacities at the end of Year 1 and before its approval and implementation.

239. The Project combines technical assistance, training, demonstrations, access to low-risk inputs, the strengthening of differentiated markets, and preparation of small farmers and fishers, entrepreneurs, local producer associations, and MSMEs to use the shared infrastructure. This design emphasizes economic and social viability, as the combination of measures reduces trial-and-error costs, improves voluntary adoption, lowers the risk of over-indebtedness among vulnerable groups, and avoids fragmented investments. It also contributes to reducing pressure on soils, water, mangroves, reefs, and fishery resources by promoting more sustainable productive practices and economic alternatives that generate returns compatible with conservation.

240. Finally, the Project improves cost-effectiveness by relying on existing capacities, structures, and initiatives including BAIC, BAMSI, sectoral public institutions, local authorities, community organizations, and national adaptation processes, instead of creating parallel systems. This strategy reduces coordination costs, strengthens institutional ownership, improves O&M sustainability, and increases post-project continuity. Complementarity with existing national programs and projects allows AF financing to focus on closing specific adaptation gaps in Andros, avoiding duplication and generating a replicable model for a resilient food system in other Family Islands.

241. The project will further deepen the cost-effectiveness analysis and provide quantitative estimates on the cost-effectiveness ratio of the proposed actions in the FP stage.

242. Table 3 below presents the analysis of alternative technologies for the activities under Components 2 and 3.

Table 3. Analysis of the measures of Components 2 and 3

Prioritized Project Technology	Description of the technology prioritized by the project, including comparative benefits to the BAU scenario, efficiency elements, costs, and international experiences	Alternative technology options for the same results	Description of alternative technology, including comparative disadvantages, costs, and national experiences.
SPMF on BAIC land, through rehabilitation and climate-proofing of the existing packing plant	Integral climate-resilient adaptation measure to reduce climate-induced post-harvest/post-catch losses, strengthen agro-fishery value chains and maintain operations during climate shocks. The SPMF reduces the sensitivity of perishable products through cold storage, ice production, improved handling, processing and packaging; reduces operational exposure through renewable energy, water harvesting and resilient infrastructure; and strengthens the adaptive capacity of farmers, fishers and producer organizations through shared facilities, value-addition services and improved market access. Multiple socio-economic and environmental benefits against the BAU scenario include: reduced post-harvest losses (currently up to 40% for some commodities in Andros, equivalent to USD10.2 million/year), increased marketable volume, product quality and shelf life, reduced discard, improved access to shared equipment and services, increased value addition and income opportunities, organic waste recovery through composting, and reduced dependence on imported fossil fuels through solar power. Cost-efficiency elements include: Cost-efficiency derives from shared infrastructure that lowers investment costs, improved energy efficiency through integrated cold storage and renewable energy systems, and enhanced operational continuity during transport disruptions, power outages and climate shocks. A local abattoir supports decentralized livestock processing, reducing dependence on New Providence. The intervention will rehabilitate an existing facility while adding components required to meet operational and resilience objectives. The facility will serve as a demonstration model for sustainable, circular island food systems and allow future expansion through its modular design. Expected O&M implications: Reduced O&M duplication through shared systems; requires governance model, user fees, trained operator and maintenance plan.	Single facility at Morgan's Bluff	Limitations compared with the selected options: Its coastal exposure would require higher floodproofing, elevation, protective works and resilient construction standards, increasing CAPEX and O&M. Higher operational risk during hurricanes and storm surge events. Comparative cost: Higher: Requires fully new construction in a coastal area exposed to flooding, storm surge and coastal erosion risk. Benefit estimate: it could generate gross benefits of up to **US$10.2 million/year** under normal operating conditions, but its risk-adjusted benefits are estimated to be **15–25% lower** than the selected option because of its exposure to storm surge and operational disruption.
		Single facility on BAMSI premises	Limitations compared with the selected options: Would increase transport costs and travel times for fishery products, requiring stronger cold-chain logistics. Could also increase the costs of transporting livestock, meat products or refrigerated products to and from the facility Comparative Cost: This option would require new infrastructure and would generate higher operating and logistics costs due to its distance from the port and main fishing areas. Benefit estimate: approximately **US$6.6–7.2 million/year**, equivalent to around **65–70%** of the benefits of the selected option, mainly because of lower accessibility for fishers and higher transport costs.
		Two separate facilities for farmers and fishers	Limitations compared with the selected options: Would reduce the efficiency of the integrated model by duplicating administration, energy, waste management, maintenance, storage and processing services, increasing logistics and coordination costs. Livestock handling and refrigerated meat distribution could also require additional transport between facilities or ports. Comparative cost: Comparatively more expensive due to higher operating costs and reduced economies of scale from shared infrastructure and services included in the preferred option. Benefit estimate: gross benefits could reach approximately **US$10.2 million/year**
		Decentralized network of solar-powered cold rooms in farm clusters, fish landing sites and aggregation points	Limitations compared with the selected options: Would reduce spoilage from heat, transport delays and power outages, helping reduce losses near producers and fishers. However, it would not provide the same income diversification, value-chain integration, market access or livestock processing benefits. Comparative cost: Lower initial CAPEX per unit. However, total lifecycle costs could increase if multiple units require separate maintenance, management, security, monitoring and backup systems. Benefit estimate: approximately **US$3.4–4.5 million/year** in avoided post-harvest and post-catch losses, but without the livestock-processing, centralized marketing and broader value-addition benefits of the selected option.
		Community processing kitchens / modular agro-processing units	Limitations compared with the selected options: Would reduce losses by converting surplus produce into value-added products. However, it would still depend on external inputs, cold storage and market channels, would not ensure continuity during climate shocks without resilient energy, water and storage systems, and would provide a narrower range of services. Comparative cost: Lower investment than a full facility Benefit estimate: approximately US$1.0–1.8 million/year, mainly from processing agricultural surpluses, equivalent to around 15–20% of the benefits of the selected option.
		Mobile abattoir + small livestock cold storage	Limitations compared with the selected options: This option would reduce dependence on New Providence for livestock processing and would help avoid losses caused by logistics disruptions. It would also provide greater territorial flexibility. However, it would not generate an integrated agro-fishery hub and could face biosecurity, waste management, food safety and operational challenges. Comparative cost: Lower investment than a complete fixed abattoir Benefit estimate: approximately **US$0.4–0.8 million/year**, limited to livestock-related transport, mortality and processing benefits, with no material reduction in agricultural or fisheries losses.
	Integrated hybrid green-grey adaptation measures to reduce climate-induced flooding, prolonged inundation, and access	Upstream sediment traps.	Limitations compared with the selected options: Although they help reduce future sedimentation, they do not directly increase the hydraulic capacity of the channel nor immediately reduce risk. Additionally, maintenance

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

Integrated hybrid green-grey approach (i) restoration and improved connectivity of tidal creeks (ii) restoration of mangrove and riparian vegetation and (iii) improvement of hydraulic capacity at channel crossings in Lowe Sound[90]	disruption in Lowe Sound, a highly exposed fishing community in North Andros. The activity combines (i) restoration and improved connectivity of tidal creeks through selective channel rehabilitation and reconnection of flow paths within the wetland system; (ii) restoration of mangrove and riparian vegetation along channel margins and erosion-prone areas to stabilize sediments and enhance natural buffering functions; and (iii) improvement of hydraulic capacity at channel crossings, including the replacement and upgrading of undersized culverts to increase water conveyance between wetlands and the sea. The activity addresses multiple climate-amplified flood mechanisms, including storm surge, sea-level rise, restricted tidal exchange, and prolonged post-storm ponding, while strengthening the ability of the coastal-wetland system to retain, exchange, and drain floodwaters in a more controlled manner. Multiple socio-economic and environmental benefits against the BAU scenario: reduced frequency and duration of flooding and road overtopping; improved accessibility, evacuation, and emergency response capacity; reduced risk of community isolation during and after extreme weather events; improved continuity of fisheries, transport, and local economic activities; enhanced hydraulic connectivity between wetlands, tidal creeks, and coastal waters; improved water circulation and drainage; strengthened mangrove and wetland ecosystem functions; sediment stabilization and erosion control; enhanced biodiversity and habitat quality for fisheries nursery areas; improved water quality; and increased resilience of both natural ecosystems and critical infrastructure. Estimated benefits of USD 1.5 million/year from asset protection and environmental co-benefits. Cost-efficiency elements include: addressing several interconnected flood drivers through a single integrated intervention rather than multiple isolated works; combining nature-based and engineered solutions to maximize long-term adaptation benefits; leveraging the ongoing reconstruction and widening of the Davey Creek bridge by the Government of The Bahamas; improving the performance of existing and planned infrastructure investments; reducing future costs associated with flood damage, transport disruption, emergency response, and community isolation; Generating co-benefits for fisheries, ecosystem services, and climate resilience while avoiding duplication with other coastal protection investments. Expected O&M implications: periodic inspection and maintenance of channel crossings, culverts, restored flow paths, and mangrove and riparian vegetation areas. Cost: To be confirmed during the detailed design and engineering assessments. As a reference, the ICZM estimates US$206,000 for mangrove outplanting in North Andros. More broadly, mangrove restoration costs can range from tens of thousands of U.S. dollars per hectare to well over US$100,000/ha. Recent economic analyses suggest that the benefits of mangrove restoration can substantially outweigh costs, with estimated benefit-cost ratios of at least approximately 7:1 (Su et al., 2021).		costs are relatively high due to the regular sediment removal using heavy machinery and hand labor. Comparative cost: Costs primarily depend on storage (retention) volume and maintenance frequency. Benefit estimate: Approximately 15–20% of the benefits of the integrated option because it only partially reduces sediment input, does not address the canal's capacity limitations, and has no environmental co-benefits.
		Deepening of the Water Channel at Lowe Sound	Limitations compared with the selected options: Channel deepening as a stand-alone intervention presents inherent limitations, as its effectiveness can progressively decline due to sediment re-accumulation and natural channel infilling processes, requiring periodic maintenance to preserve hydraulic capacity. During extreme events, hydraulic capacity may still be insufficient, maintaining the risk of scour and damage to structures such as bridges. In addition, it primarily addresses a localized hydraulic constraint without resolving the broader factors contributing to flooding, including restricted connectivity within the wetland system, reduced tidal exchange, and ecosystem degradation, thereby limiting its long-term effectiveness as a comprehensive flood-risk reduction measure. Comparative cost: The ICZM cost estimate identifies US$920,000 for the Earthworks: Davey Creek Channel item. Benefit estimate: approximately 35–40% of the benefits of the integrated option, because it does not include upstream sediment control, complementary drainage measures, or environmental co-benefits.
		Incorporate additional culverts or relief openings in the road embankment.	Limitations compared with the selected options: It does not remove accumulated sediment nor directly increase the depth of the creek. If the channel continues to silt up, its hydraulic capacity may keep decreasing over time. During severe storm surge events, the additional openings may prove insufficient if flow exceeds the system's capacity. Therefore, as a stand-alone measure, this option would be insufficient to ensure adequate hydraulic performance across the broader tidal creek and wetland system. Comparative cost: It generally involves moderate costs associated with civil works and the installation of hydraulic structures, typically lower than permanent deep dredging and with less direct environmental disturbance to the channel bed. Benefit estimate: Approximately 30–35% of the benefits of the integrated option, because it only improves local flow and does not address the factors that cause flooding throughout the system, and it has no environmental co-benefits.
		Active (grey) structural measures: flood gates, embankment roads, pumping stations, and secondary relief outlets.	Limitations compared with the selected options: Traditional measures such as road embankments, pumping stations and controlled outlets would require significant operation and maintenance. The preferred hybrid green-grey solution relies mainly on natural and gravity-based systems, reducing O&M needs while providing ecosystem benefits. Gates and pumps could be considered in a second phase if flooding at Lowe Sound is not sufficiently reduced. Comparative cost: The cost of implementing a structural (grey) flood control system may vary depending on the results of a hydrological and hydraulic model which identifies the critical points to be intervened, pumping capacity, ideal crest elevation for the embankments and relief outlet locations. This project would probably be positioned within the range of 6 to 12 million USD, depending on the final design and project specifications. Benefit estimate: Approximately 70%-80% of the benefits of the integrated option due to high drainage capacity, but it has no environmental co-benefits.
		Selective clearing / vegetation management within Davey Creek, without full dredging.	Limitations compared with the selected options: It may temporarily improve flow by removing vegetation, debris and obstructions, but does not address sedimentation or significantly increase hydraulic capacity. Its effectiveness against storm surge and hurricanes is limited, particularly where channel depth has already been reduced. It also requires recurring maintenance, which must be carefully managed to avoid degrading mangrove ecosystems. Comparative cost: It generally involves low to moderate costs, as it avoids deep excavation and major hydraulic works. Benefit estimate: Approximately 15–25% of the benefits of the integrated option, because it provides only partial hydraulic improvement and limited long-term effectiveness, and it has no environmental co-benefits.

[90] Bridge widening/elevation or bridge replacement alternative is not considered further because the intervention is already being financed by the Government of The Bahamas.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

Creation of Mangrove "Islets."	Hybrid nature-based adaptation measure to reduce climate-induced storm surge flooding, wave energy and shoreline exposure in one of Andros' most vulnerable fishing settlements. This grey-green design addresses the limitation of planting alone by creating stable foundations that allow mangroves to survive in storm conditions and mature into a living coastal protection barrier. Its adaptation value lies in reducing exposure to storm surge and tidal flooding while strengthening the natural infrastructure that supports fisheries productivity and food-system resilience. Multiple socio-economic and environmental benefits against the BAU scenario include: reduced storm surge and wave impacts on Lowe Sound's shoreline; strengthened protection for a traditional fishing community and landing site for lobster and conch value chains; reduced disruption risks to fisheries-based livelihoods; enhanced mangrove habitat and nursery functions for lobster, conch and finfish; improved sediment retention and shoreline stability; and increased resilience of natural coastal defences in a community with high storm surge exposure, low topography, limited adaptive capacity and the highest residential building exposure among the assessed Andros sites. Estimated benefits of USD 1.6 million/year from asset protection and environmental co-benefits. Cost-efficiency elements include: using an engineered substrate to increase the survival and effectiveness of mangrove planting; using locally available conch shells, gravel and sand to reduce imported material requirements; generally have lower environmental impacts than traditional breakwaters and are compatible with NbS approaches, while also providing additional ecological benefits such as improved marine habitat and natural shoreline stabilization. Expected O&M implications: Requires ecological and biodiversity monitoring, replanting if needed, protection from damage, and community / BNT involvement. Cost: The ICZM engineer's estimate identifies US$2.06 million for creation of mangrove islets. This represents about 3.6% of the estimated US$57.0 million construction exposure value in Lowe Sound. There are international precedents for low-crested offshore barriers solution in the Gulf of Mexico and Florida. One example is the "Pensacola East Bay Oyster Habitat Restoration" project in Florida, supported by the National Fish and Wildlife Foundation (NFWF), where oyster reefs were implemented to reduce coastal erosion, improve marine habitats, and increase resilience to wave action and storm surge. These projects have demonstrated benefits for both coastal protection and ecological restoration in vulnerable coastal environments. https://www.nfwf.org/sites/default/files/gulf/Documents/fl-pensacola%20east%20bay%20oysters%20ii-18.pdf	Coastal revetments or traditional riprap.	Limitations compared with the selected options: In comparison, the placement of hard protections such as rock revetments or concrete structures along the shoreline provides immediate protection and high structural resistance; however, it can generate environmental impacts, alter natural coastal dynamics, and potentially transfer erosion to adjacent areas. Comparative cost: Rock armoring and coastal revetment costs depend on rock size, site accessibility and wave conditions. In hurricane-exposed island environments such as North Andros, costs increase due to transport, logistics and design requirements. Typical costs range from US$600–3,000 per linear meter and may be higher where material access and transportation are constrained. Benefit estimate: Approximately 70% of the estimated benefits generated by the selected option are due to its high asset protection but lack of environmental co-benefits, which may even be negative.
		Geotextile tubes or geobags.	Limitations compared with the selected options: These consist of geotextile tubes or bags filled with sand or sediments, used for coastal stabilization, erosion reduction, and temporary or supplementary protection against waves and storm surge. They present several disadvantages, including a limited lifespan, vulnerability to damage and rupture during hurricanes or severe storms, degradation due to UV exposure, and the need for periodic maintenance or replacement. Can create visual and environmental impacts if exposed or ruptured. Comparative cost: Costs in the Caribbean and similar coastal regions can range approximately between US$200 and US$1,500 per linear meter, depending on size, site conditions, logistics, and installation type. Benefit estimate: Approximately 26% of the benefits of the selected option, due to limited asset protection and no environmental co-benefits.
		Artificial reef	Limitations compared with the selected options: Artificial reefs generally involve high costs due to specialized materials, maritime transport, heavy equipment, hydraulic design and offshore construction. Installation can also cause environmental impacts, including altered currents and sediment transport, disturbance of benthic habitats, and long-term ecological changes. While they can support coastal protection and provide marine habitat, they offer fewer benefits for carbon sequestration, ecosystem restoration, biodiversity and biological stabilization, and, as fixed structures, have limited adaptability to sea-level rise and changing coastal dynamics. Comparative cost: Artificial reef barrier systems typically range between USD 200 and USD 20,000 per linear meter, depending on scale, materials, marine conditions, and engineering complexity. Benefit estimate: Approximately 45% of the benefits of the selected option, due to the limited protection of assets and environmental co-benefits, could even have negative aspects.
		Exposure reduction measures (elevation/floodproofing of homes and critical assets, raised roads and evacuation routes, and managed retreat/rezoning)	Limitations compared with the selected options: These measures can reduce the exposure of people, homes, infrastructure and transport access to coastal flooding and storm surge. However, they do not attenuate wave energy, reduce storm surge, stabilize shorelines, or strengthen coastal ecosystem functions. Their effectiveness depends on physical protection, relocation, or land-use controls rather than reducing the underlying hazard. They also provide limited benefits for fisheries' habitats, biodiversity, carbon sequestration and long-term ecosystem resilience. Depending on the approach, they may involve social and economic impacts associated with relocation, land-use restrictions, accessibility changes, or the retrofitting of existing assets. Comparative cost: Costs vary widely depending on the scale and measure implemented. Building elevation and floodproofing typically range from USD 30,000 to USD 150,000 per house, while road elevation, relocation and land-use planning measures can involve several million dollars and substantial long-term implementation costs related to land acquisition, compensation, infrastructure relocation and maintenance. Benefit estimate: Approximately 55% of the benefits of the selected option, due to limited asset protection and no environmental co-benefits.
		Living shoreline / continuous mangrove belt along the coastline, without offshore islets.	Limitations compared with the selected options: Although it provides ecological benefits similar to the preferred option, it is less effective at reducing storm surge and high-energy waves than offshore vegetated barriers. Significant protection requires very wide mangrove belts, potentially exceeding 1 km, which may be constrained in Lowe Sound by limited space, existing development and coastal dynamics. Comparative cost: It generally involves moderate costs and is less expensive than complex offshore structures, although costs may increase if large restoration areas, land acquisition or additional erosion control measures are required. Living shoreline and mangrove restoration projects are widely implemented across the Bahamas, Florida, and the Gulf of Mexico.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

			Benefit estimate: approximately around 32% of the benefits of the selected option, due to its lower effectiveness against high-energy waves.
Resilient and innovative diversification of farmers', livestock producers' and fishers' livelihoods and production.	Adaptation measure aimed at diversifying livelihoods and strengthening the resilience of agricultural, livestock and fisheries production to climate change. The intervention expands and stabilizes incomes while reducing pressure on water resources and soil degradation through sustainable practices and conservation-compatible economic alternatives. It also benefits women and vulnerable groups by reducing exposure to catastrophic productive losses and improving access to knowledge, inputs, in-kind financing and structured markets. Multiple socioeconomic and environmental benefits compared to the BAU scenario: i) It reduces vulnerability to droughts, heatwaves and extreme events through sustainable agroproductive practices that improve soil productivity, water retention and the resilience of marine and coastal ecosystems, reducing yield losses and the need for reactive assistance. ii) It improves soil management, reduces erosion, diversifies productive landscapes, lowers impacts on marine and coastal ecosystems, promotes efficient input use and reduces food losses, supporting the conservation of ecosystems, soils and water resources. iii) By strengthening local markets and value chains, it increases income, rural employment and food-system entrepreneurship. Efficiency elements: i) It combines community consultations, awareness-raising and technical assistance with low-risk inputs, demonstration plots and market development to accelerate adoption and reduce trial-and-error costs. ii) It promotes innovative practices such as hydroponics and aquaculture, diversifying incomes and strengthening absorptive capacity to climate shocks. iii) It prioritizes feasible and socially accepted alternatives, increasing adoption and long-term sustainability while reducing risks of conflict or resistance. iv) Training prepares producers, processors and service providers to use the SPMF, maintain quality standards and reduce post-harvest losses. v) It builds on BAMSI and BAIC, leveraging existing capacities and lessons learned while reducing implementation costs compared with creating new structures. Expected O&M implications: Requires continued extension support and market linkages through BAIC/BAMSI/local associations. International example of income increases from local production support programs: for every 1,000 metric tons of food purchased locally, around 310 farmers increase their annual gross margin by USD 1,865, and approximately 190 full-time jobs are generated each year. WFP and ECLAC.	Producer-level grants or vouchers for technology packages	Limitations compared with the selected options: Provides farmers and fishers with direct access to inputs such as resilient seeds, shade nets, drip irrigation kits, small tools, cold boxes, fish handling equipment, aquaculture materials or basic processing equipment. | It reduces adoption barriers, but may generate fragmented investments without common standards, technical support, aggregation or market coordination. It may also increase maintenance and monitoring costs across many dispersed beneficiaries. Comparative cost: Lower initial cost per beneficiary, but potentially higher monitoring and replacement costs; weaker economies of scale than a networked model. Benefit estimate: approximately around 42% of the benefits of the selected option. It can quickly reach vulnerable producers and reduce immediate production losses, but their effectiveness is limited by the lack of sustained technical assistance, coordinated market access, quality standards, and landscape-level environmental management, leading to lower adoption, maintenance, post-harvest performance, and long-term resilience.
		Standalone microfinance or credit line for climate-smart livelihoods	Limitations compared with the selected options: Provides working capital for farmers, fishers and small enterprises to invest in adaptive practices, inputs, equipment and product transformation. Improves access to finance but may increase debt exposure if not linked to technical assistance, aggregation and predictable off-take markets. It may be less suitable for vulnerable groups without collateral or stable cash flow. Comparative cost: Potentially lower public investment if revolving, but higher fiduciary and default risk Benefit estimate: approximately around 35% of the benefits of the selected option, due to its limited effectiveness caused by restricted access for vulnerable groups and women, exposure to default following climate crises, and the absence of structured market channels.
		Reactive post-event assistance	Limitations compared with the selected options: it acts only after damage has occurred; it does not reduce exposure or structural vulnerability and may create dependency or "cycles" of incomplete recovery. It does not improve soil productivity, water resilience or resilience to heat stress, meaning that losses may recur. Comparative cost: recurrent and increasing costs for the Government/organizations, including transfers, input distribution and emergency assistance, with temporary benefits and no environmental co-benefits Benefit estimate: 12% of the benefits of the selected option, it does not prevent physical losses to crops, livestock, or ecosystems, create sustained income or employment, or generate environmental co-benefits. Its effects are therefore temporary and may result in repeated cycles of incomplete recovery.

D. Describe how the project/programme is consistent with national or sub-national sustainable development strategies, including, where appropriate, national adaptation plan (NAP), national or sub-national development plans, poverty reduction strategies, national communications, or national adaptation programs of action, or other relevant instruments, where they exist.

243. The proposed project is consistent with The Bahamas' national and sub-national climate adaptation, food security, environmental management, gender equality and sustainable development frameworks. It is designed as R4R-02 under the **Government-led R4R Program (2026-2034), coordinated by the Office of the Prime Minister (OPM) through the Climate Change and Environmental Advisory Unit (CCEAU).** R4R provides the overarching national framework to reduce systemic climate vulnerability and promote more balanced, risk-informed development across the Family Islands. By focusing on Andros as the country's primary "Food Island", the project contributes to R4R's objective of strengthening local adaptive capacity and generating scalable resilience models for other Family Islands. The Project also supports the objectives of the **National Policy for the Adaptation to Climate Change (2005)**, which established the national policy framework for addressing the short-, medium- and long-term impacts of climate change through coordinated adaptation planning and implementation.
244. The project supports The Bahamas' adaptation agenda under the **NDC 3.0 (Oct 2025) and the emerging NAP process (ongoing)** by generating climate-risk evidence, vulnerability assessments, climate information systems, and practical lessons that can inform national adaptation planning and future investment decisions. The proposed Climate-Resilient and Sustainable Food Systems Master Plan will further translate these lessons into a national planning instrument for integrating adaptation priorities into food system governance, infrastructure, production, processing, market access and investment decisions. The project will directly support the implementation of NDC 3.0 adaptation targets related to food and water security, ecosystem management and conservation, climate education and awareness, and climate information and monitoring, while mainstreaming gender equality and social inclusion (GESI) and promoting youth-inclusive climate action. The project is also aligned with the **Third National Communication to the UNFCCC (Sept 2024)**, which identifies climate risks to agriculture, fisheries, water resources, coastal ecosystems, infrastructure and vulnerable communities. Through investments in climate-resilient productive infrastructure, ecosystem-based coastal protection, sustainable resource management and climate-smart livelihoods, the project directly responds to these risks and supports a shift from reactive disaster response toward planned, evidence-based adaptation. The Third National Communication also recognizes gender as a cross-cutting determinant of climate vulnerability and highlights the importance of mainstreaming gender considerations across adaptation planning and implementation. Consistent with this approach, the project incorporates gender-responsive implementation measures, inclusive stakeholder engagement and targeted support for women, youth and vulnerable groups to strengthen equitable resilience outcomes
245. At the sectoral level, the project is consistent with the **National Food and Nutrition Security Policy and Action Plan for the Commonwealth of The Bahamas (2017-2022)** and the **Health National Adaptation Plan (HNAP) (Oct 2024)**, as it contributes to strengthening local production, reducing post-harvest and post-catch losses, improving storage and processing capacity, and increasing access to safe, nutritious and locally produced food under climate stress. These measures are particularly relevant in a country with high food import dependence and climate-sensitive supply chains. The Project also supports the HNAP objective of integrating climate risks into public health planning by improving food safety, reducing post-harvest losses, strengthening local food systems and contributing to healthier and more resilient communities, particularly for vulnerable populations.
246. At the sub-national level, the project builds directly on the **2017 Sustainable Development Master Plan for Andros Island (Feb 2017)**, which identifies climate resilience, livelihoods, food security, freshwater resources, ecosystems and sustainable local development as key priorities. While implementation of the Master Plan has been constrained by limited fiscal space, the project will help operationalize its priorities through concrete adaptation investments, updated climate-informed planning tools, resilient infrastructure, livelihood support and strengthened institutional coordination.
247. The project also supports national gender and social inclusion priorities, including the **National Gender Equality and Equity Policy (2023–2033)**, currently under development and expected to be finalized before implementation. Gender-responsive measures will be embedded across project components, including targeted support for women and youth, improved access to training, finance, productive assets and markets, recognition of informal female producers and vendors, and inclusive participation in food-system and climate-resilience decision-making.
248. The Project is further aligned with the **National Gender-Based Violence Strategy (2015), the National Resilient Recovery Policy and Resilient Recovery Strategy and Plan (2020**), and the **draft National Gender Equality and Equity Policy (2023–2033**). These policy instruments promote gender equality, social inclusion and resilience as cross-cutting principles for national development. Consistent with these frameworks, the Project incorporates inclusive stakeholder engagement, equitable access to project benefits, gender-responsive implementation arrangements, measures to prevent gender-based violence and sexual exploitation, abuse and harassment (SEAH), and targeted support for women, youth and other vulnerable groups to strengthen adaptive capacity and resilience.

E. Describe how the project/programme meets relevant national technical standards, where applicable, such as standards for environmental assessment, building codes, etc., and complies with the Environmental and Social Policy of the Adaptation Fund.

249. The project will ensure compliance with national laws in all project activities through coordination with the governing bodies of each law and CCEAU as the Executing Entity of the Project. Additionally, project will also ensure compliance with the AF's Environmental and Social Policy and the Gender Policy.
250. The national technical standards, regulations, permits, licenses and certifications presented below are also applicable, where relevant, to the identified USPs. No construction, installation, commissioning or operational activities will commence until all required studies, environmental and social assessments, permits, licenses, certificates and regulatory approvals have been completed and obtained from the relevant competent authorities.

Table 4 consolidates the applicable national technical standards and regulatory requirements relevant to the Project. For each applicable instrument, the table identifies the corresponding project component(s) and activity(ies), the responsible, competent authority, and the specific measures that will be implemented to ensure compliance throughout project implementation and operation.

Table 4. Applicable regulations for all activities, measures to ensure compliance and competent authority

National Technical Standard / Regulation	Sector	Relevant Project Activity	Measures to Ensure Compliance	Competent Authority
Disaster Risk Management Act (2022): aims to develop, promote and implement an approach to disaster risk management that is holistic, comprehensive and integrated, focuses on reducing risks especially to those that are more vulnerable because of age disabilities, poverty, gender, physical displacement, others.	Disaster Risk Management	**Comp. 1 Comp. 2 Comp. 3 Comp. 4**	Implement emergency preparedness and response procedures during construction and operation; establish communication protocols with local disaster management authorities; ensure contingency plans, evacuation procedures and community awareness activities are operational throughout project implementation, with particular attention to vulnerable groups.	**Department/Agency:** Disaster Risk Management Authority **Ministry:** Office of the Prime Minister
Environmental Health Services Act (Ch 232) and amendments: provides general framework to promote conservation and maintenance of the environment and public health based on regulations to prevent and control air pollution, soil contamination, and preserve water quality.	Environment	**Comp. 2 Comp. 3**	Implement pollution prevention measures during construction and operation, including proper waste segregation, wastewater management, dust suppression, spill prevention and housekeeping practices; monitor environmental health conditions to prevent impacts on surrounding communities and water resources.	**Department/Agency:** Department of Environmental Health Services (DEHS) **Ministry:** Ministry of the Environment and Natural Resources
Environmental Planning and Protection Act (2019): establish the department of environmental planning and protection; to provide for the prevention or control of pollution, the regulation of activities, and the administration, conservation, and sustainable use of the environment; and for connected purposes.	Environment	**Comp. 2 Act. 3.1.2; Act. 3.1.3**	Obtain all environmental authorizations before commencing regulated activities; implement all environmental management and monitoring measures required by the competent authority; maintain environmental records and facilitate inspections throughout implementation.	**Department/Agency:** DEPP **Ministry:** Ministry of the Environment and Natural Resources
Environmental Impact Assessment Regulation (2020): an extension of the Environmental Planning and Protection Act, it outlines the Environmental Impact Assessment Regulations which apply throughout the territory.	Environment	**Comp. 2 Act. 3.1.2; Act. 3.1.3**	Comply with all conditions established through the environmental assessment process; implement mitigation, monitoring and reporting commitments during construction and operation; update environmental management measures if project activities are modified.	**Department/Agency:** DEPP **Ministry:** Ministry of the Environment and Natural Resources
Environmental Protection (Control of Plastic Pollution) Act, 2019. prohibit single use plastic foodware and non-biodegradable, oxo-biodegradable single use plastic bags. It bans the import, distribution, manufacture, sale, supply, or use of "single use plastic food ware.	Environment	**Act 2.1.1 Comp.3**	Prohibit procurement and use of banned single-use plastic products during project implementation; promote reusable or biodegradable alternatives in construction camps, training events, facility operation and food handling activities.	**Department/Agency:** DEPP **Ministry:** Ministry of the Environment and Natural Resources
Conservation and protection of the physical landscape of The Bahamas (Ch 260): make provision for the conservation and protection of physical landscape, contains parts regarding administration, regulation of excavation and landfill operations.	Environment	**Act. 2.1.1 Act. 2.1.2**	Limit land disturbance to approved work areas; properly manage excavation materials and disposal sites; rehabilitate disturbed areas after completion of works and prevent unnecessary alteration of natural landscapes.	**Department/Agency:** Department of Physical Planning **Ministry:** Ministry of Works and Family Island Affairs
Bahamas Protected Fund Act (2014): national fund that ensure land and marine parks have funding to support staffing, community engagement, equipment purchases, visitor facilities, and ecosystem monitoring.	Environment	**Act. 2.1.2**	Coordinate implementation of ecosystem restoration activities with relevant protected area authorities; ensure project interventions support long-term ecosystem management and monitoring arrangements where activities occur within or adjacent to protected areas.	Ministry: Ministry of the Environment and Natural Resources
Bahamas Agriculture and Marine Science Institute Act (2022): establishes and governs BAMSI, enabling it to provide education, research, technical training, and career preparation in agriculture, marine science, environmental studies, and related fields.	Agriculture and Fisheries	**Comp. 3 Comp. 4**	Coordinate technical training, demonstration activities and knowledge transfer with BAMSI where appropriate; promote dissemination of climate-resilient agricultural and fisheries practices through institutional collaboration.	**Department/Agency:** BAMSI **Ministry:** Ministry of Agriculture and Marine Resources
Agriculture and Fisheries Act (1964): provide for the supervision and development of agriculture and fisheries in The Bahamas.	Agriculture and Fisheries	**Act. 2.1.1 Comp. 3**	Implement project activities in coordination with national agricultural and fisheries authorities; promote climate-resilient production practices consistent with national sector development objectives and extension services.	**Department/Agency:** Department of Agriculture (DoA) Department of Marine Resources (DMR) **Ministry:** Ministry of Agriculture and Marine Resources
Fishery Act, 2020: regulates fishery resources, ensuring sustainable conservation and management, promotes ecosystem-based and precautionary approaches, supports fishing communities, provides for licensing of commercial fishers and vessels, and combats illegal, unreported, and unregulated (IUU) fishing.	Agriculture and Fisheries	**Comp. 2 Comp. 3**	Ensure fisheries supported by the project comply with national licensing requirements, sustainable harvesting measures and traceability provisions; promote ecosystem-based fisheries management and prohibit support to illegal, unreported or unregulated fishing activities.	**Department/Agency:** DMR **Ministry:** Ministry of Agriculture and Marine Resources
Food Safety and Quality Act (2016); main framework regulating food safety and quality at every stage of the food chain to protect human health; it mandates strict traceability, food business registration, and labeling requirements and certification for food handling.	Food Production	**Act. 2.1.1 Comp. 3**	Register food processing operations where required; implement food safety management procedures, traceability systems, sanitation protocols, product labelling requirements and staff training before commencing processing activities; maintain records for regulatory inspections.	**Department/Agency:** Bahamas Agricultural Health and Food Safety Authority **Ministry:** Ministry of Agriculture and Marine Resources
Animal Health and Production Act (2016); promotes animal health and production through good agricultural practices, prevents the introduction and spread of animal disease and alien species	Food Production	**Act. 2.1.1 Comp. 3**	Apply biosecurity measures during handling and processing of animal products; ensure veterinary and sanitary requirements are met; prevent introduction or spread of animal diseases through appropriate operational procedures and inspections.	**Department/Agency:** Bahamas Agricultural Health and Food Safety Authority – Veterinary Services Unit **Ministry:** Ministry of Agriculture and Marine Resources

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

and regulates the trade of animals and their products.				
Forestry Act (2010 and amendments) and Forestry regulation (2014): provide the conservation and control of forests; establishes a Forestry Unit to declare and manage forest reserves and monitor protected trees. Includes carbon sequestration and reforestation within the possible objectives of Forest Management Plans and protect designated mangrove and mangrove ecosystems and other important biological and ecosystem services.	Forestry	**Act. 2.1.2 Act. 3.1.3**	Prevent unnecessary clearing of forest vegetation; protect mangroves and designated forest resources during implementation; restore disturbed vegetation where required and avoid activities affecting protected ecosystems outside approved work areas.	**Department/Agency:** Forestry Unit **Ministry:** Ministry of the Environment and Natural Resources
Forestry (Declaration of Protected Trees) Order, 2021: The declaration of protected trees for the purpose of this Act is specified in Part I (Endemic or Endangered or Threatened Protected Trees) and II (Cultural or Historical and Economic Protected Trees).	Foresty	**Comp. 2 Act. 3.1.2 Act. 3.1.2**	Identify protected tree species prior to site activities; avoid removal or disturbance of protected trees unless authorized; establish exclusion zones and supervision where protected vegetation is present.	**Department/Agency:** Forestry Unit **Ministry:** Ministry of the Environment and Natural Resources
Public Works Act: provides for the construction, management and development of public works, buildings and roads.	Buildings	**Comp. 2 Act. 3.1.3**	Execute civil works in accordance with approvals issued by the competent public authority; maintain construction supervision, quality control and documentation throughout implementation.	**Department/Agency:** Department of Public Works **Ministry:** Ministry of Works & Family Island Affairs
Building regulation Act (Ch 200): Regulate the construction, alteration and repair of buildings, provide for the re-instatement or removal of dangerous or dilapidated buildings, authorize the publication of a building code.	Buildings	**Act. 2.1.1 Act. 3.1.2 Act. 3.1.3**	Obtain required building permits before construction; ensure inspections are completed at the stages required by the competent authority; rectify any non-compliance identified during inspections before commissioning facilities.	**Department/Agency:** Department of Public Works – Building Control Section **Ministry:** Ministry of Works & Family Island Affairs
Bahamas Building Code (3rd Edition, 2003): the main technical building code used under the Building Regulation Act and the Buildings Regulation General Rules.	Buildings	**Act. 2.1.1 Act. 3.1.2 Act. 3.1.3**	Ensure construction complies with approved structural, electrical, plumbing, fire safety and accessibility requirements; maintain quality assurance and construction records demonstrating compliance prior to occupancy.	**Department/Agency:** Department of Public Works – Building Control Section **Ministry:** Ministry of Works & Family Island Affairs
Bahamas Public Parks and Public Beaches Authority Act (2014): establish the public parks and public beaches authority, authorizing it to identify, regulate, maintain, develop and conserve public parks and public beaches and for connected purposes.	Buildings	**Act. 2.1.2**	Coordinate any activities affecting public parks or beaches with the responsible authority; minimize disruption to public access; restore affected public areas after completion of works where applicable.	**Department/Agency:** Bahamas Public Parks and Public Beaches Authority **Ministry:** Ministry of the Environment and Natural Resources
Electricity Act (2024): aims to modernize and consolidate the law relating to the supply of electricity in the country, it promotes energy efficiency, energy conservation, and the development and use of renewable energy resources and technologies	Electricity	**Act. 2.1.1 Act. 3.1.2 Act. 3.1.3**	Operate electrical installations in accordance with national safety and efficiency requirements; prioritize energy-efficient equipment and ensure electrical systems are inspected and commissioned before operation.	**Ministry:** Ministry of Energy, Utilities and Aviation Utilities Regulation and Competition Authority (URCA) (Independent Regulator)
Planning and Subdivision Act (2010) is the primary legislation regulating land use, zoning, and property development across the country	Land	**Act. 2.1.1 Act. 2.1.2**	Ensure project implementation remains consistent with approved land-use planning permissions and subdivision approvals; avoid activities outside authorized project boundaries without prior approval.	**Department/Agency:** Department of Physical Planning **Ministry:** Ministry of Works & Family Island Affairs
Protection Against Violence Act (2023): It establishes the Protection Against Violence Commission and provides victims with extensive support services, including legal, psychological, and medical assistance. It explicitly aligns national law with international obligations like CEDAW.	Gender	**Comp. 1 Comp. 2 Comp.3 Comp.4**	Adopt and implement codes of conduct for project personnel; establish confidential grievance and referral mechanisms for survivors; provide information on available protection services and ensure non-discrimination during stakeholder engagement.	**Department/Agency:** Department of Gender and Family Affairs **Ministry:** Ministry of Social Services
Sexual Offences and Domestic Violence (2006): recognizes rape as an offence in which the act of any person above the age of 14 having intercourse with another person who is not his spouse. It also acknowledges trafficking or procuration attempts for the purpose of intercourse, prostitution, failure to disclose status regarding acquired immunodeficiency syndrome (AIDS) and intercourse with children or the mentally impaired as sexual offences.	Gender	**Comp. 1 Comp. 2 Comp.3 Comp.4**	Enforce zero tolerance for SEAH; require all contractors and workers to comply with project Codes of Conduct; establish confidential reporting, survivor-centered referral pathways and mandatory awareness training.	**Ministry:** Ministry of Social Services Ministry of National Security
Disabilities (Equal Opportunity) Act (2014): This act requires organizations to maintain a ratio of at least 1 differently abled person for every 100 employees and prohibits discrimination in compensation and benefits.	Labor Rights, Health and Safety	**Comp.1 Comp. 2 Comp.3 Comp. 4**	Ensure equal access to employment, training and project benefits; provide accessible consultation venues, communication materials and facilities; prevent discrimination during recruitment and implementation activities.	**Department/Agency:** National Commission for Persons with Disabilities **Ministry:** Ministry of Social Services

Employment Act (2001): Dictates standard working hours, minimum wage, overtime, vacation, and severance pay. Establish minimum working age for employment (14 years)	Labor Rights, Health and Safety	**Comp.2 Comp.3**	Ensure contractors comply with national labour legislation, including minimum working age, wages, working hours, leave entitlements and contractual conditions; maintain employment records available for inspection.	**Department/Agency:** Department of Labour **Ministry:** Ministry of Labour, the Public Service and National Insurance
Health and Safety at Work Act (2002): Establishes guidelines for workplace hazards, protective equipment, and the duties of employers.	Labor Rights, Health and Safety	**Comp.2 Comp.3 Comp. 4**	Implement occupational health and safety procedures, risk assessments, induction training, use of personal protective equipment, incident reporting and emergency response measures for all project workers and contractors.	**Department/Agency:** Department of Labor. **Ministry:** Ministry of Labor, the Public Service and National Insurance
Certificate of Environmental Clearance	Buildings	**Comp.2 Act. 3.1.2 Act. 3.1.3**	Obtain the Certificate of Environmental Clearance prior to commencement of regulated works and comply with all permit conditions throughout construction and operation, including monitoring and reporting obligations.	**Department/Agency:** DEPP **Ministry:** Ministry of the Environment and Natural Resources
Certificate of Sanitation (BAHFSA)	Food Production	**Act. 2.1.1 Comp. 3**	Obtain sanitation certification before commissioning the processing facility; maintain hygiene standards, cleaning schedules, pest management procedures and periodic sanitary inspections during operation.	**Department/Agency:** Bahamas Agricultural Health and Food Safety Authority **Ministry:** Ministry of Agriculture, Marine Resources and Family Island Affairs. **implemented by** Directorate of Veterinary Services (under the Ministry of Agriculture and Marine Resources)
Processing Plant License	Food Production	**Act. 2.1.1 Comp. 3**	Obtain the required processing plant license before commencing fish processing activities; maintain operational records, hygiene standards, product traceability and inspections required to keep the license valid.	**Department/Agency:** Bahamas Agricultural Health and Food Safety Authority **Ministry:** Ministry of Agriculture, Marine Resources and Family Island Affairs. **implemented by** Directorate of Veterinary Services (under the Ministry of Agriculture and Marine Resources)

F. Describe if there is duplication of project/programme with other funding sources, if any.

251. The project has considered the experiences of other projects that have worked on similar themes, as well as activities implemented through government agencies, in order to ensure complementarity, foster synergies, and avoid duplication of actions. The table below (Table 5) presents these projects and how they have been considered in the development of the activities included in this concept note.

Table 5. Projects considered to avoid duplication and ensure complementarity

Project Title	Status/ Implementation Date	Description	Complementarity/ Lessons Learned by the Project
Strengthening Fisheries and Aquaculture Governance in The Bahamas / Aquaculture Resources and Potentials of The Bahamas (TCP/BHA/3501)	Completed 2014- 2016 Executors: FAO; counterpart: Department of Marine Resources / Ministry of Agriculture, Marine Resources	Built institutional capacity in fisheries and aquaculture by developing management policies, planning frameworks, and a Fisheries Management Information System (FISMIS). Strengthened the legal and policy framework for the sector, assessed aquaculture economic potential and socio-economic impacts of recreational fisheries, and mobilized additional resources for aquaculture development through broad stakeholder participation.	Lessons on fisheries governance, planning frameworks, information systems, stakeholder participation and aquaculture development inform the project's climate-informed knowledge products, planning instruments, information exchange mechanisms and knowledge-sharing activities under Component 1. They also support Component 3 activities related to sustainable fisheries practices, aquaculture opportunities, livelihood diversification and inclusive stakeholder participation.
Rebuilding fisheries livelihoods in Abaco and Grand Bahama islands following Hurricane Dorian (TCP/BHA/3703)[91]	Completed 2019-2021 Executors: FAO; counterpart: DMR / Ministry of Agriculture and Marine Resources	Restored fisheries livelihoods post-Hurricane Dorian by supporting fishers with equipment (lobster condos, fish pot materials, boats, buying stations) and training. Assessed damage to fisheries infrastructure and developed a climate-resilient investment plan for long-term recovery and sustainable sector development.	The lessons learned on experience with practical support to fishers, equipment replacement, training, and damage assessment provide useful guidance for the new project's activities on knowledge generation and exchange under Component 1 and for livelihood support, producer training, and adoption of resilient practices under Component 3.
Investment Plan for the Development of Climate Resilient Fisheries Infrastructure in Grand Bahama and Abaco Islands (TCP/BHA/3703)[92]	Completed 2021 Executors: FAO / Technical counterpart DMR	The project focuses on rebuilding and strengthening fisheries infrastructure in Grand Bahama and Abaco following Hurricane Dorian, with an emphasis on climate resilience. It proposes the development of new, more durable buying stations equipped with cold storage and improved facilities to ensure proper handling of fish products. By applying a "build back better" approach, the project integrates climate risk assessments and resilient design standards to support the long-term recovery, sustainability, and economic viability of the fisheries sector.	This investment plan provides key lessons for the proposed intervention on how to design fisheries infrastructure using a climate-resilient and "build back better" approach. Its emphasis on durable buying stations, cold storage, improved fish handling, climate risk assessment, and resilient infrastructure standards has informed the design of the climate-proofed agro-fisheries processing, storage, and market facility under Component 2.
Port State Measures Support Project / Combatting IUU Fishing in Five SIDS (GCP/RLA/222/USA)	Completed 2017-2020 Executors: FAO; resource partner: U.S. Bureau of International Narcotics and Law Enforcement Affairs; National Partner DMR Bahamas	The project supports the implementation of the Port State Measures Agreement (PSMA) to combat illegal, unreported and unregulated (IUU) fishing in The Bahamas and other Caribbean countries. It focuses on strengthening legal, institutional and operational frameworks by supporting fisheries law reforms, reviewing and improving Monitoring, Control and Surveillance (MCS) systems, and enhancing interagency coordination. The project also develops standard operating procedures, risk assessment tools and information-sharing systems, while building national capacities to enforce regulations, conduct inspections and	Lessons learned on fisheries governance, legal and institutional strengthening, monitoring, control and surveillance, interagency coordination, and compliance with sustainable fisheries management principles are relevant to the proposed project's knowledge-sharing, awareness-raising, and capacity-building activities under Components 1 and 3, particularly where sustainable fishing practices, responsible resource use, and market access depend on improved governance and regulatory compliance.

[91] FAO. (2022). *Rebuilding Fisheries Livelihoods in Abaco and Grand Bahama Islands Following Hurricane Dorian* (TCP/BHA/3703).
[92] Sciortino, J., & Bethel, T. (2021). *Investment Plan for the Development of Climate-Resilient Fisheries Infrastructure in Grand Bahama and Abaco Islands* (First draft, TCP/BHA/3703).

		improve fisheries governance, ultimately contributing to more sustainable fisheries management.	
Diagnostic and Prioritization of Sectors for Boutique Agriculture – Strategy and Action Plan	Completed 2019 Executors: IDB – Support for Economic Diversification in The Bahamas; counterpart MAMR, with BAIC, BAMSI, BDB/SDBC and other partners	Diagnostic and action plan for boutique agriculture: agribusiness financing, technical assistance, information systems, extension services, PPPs, and FDI. It identifies key barriers, including lack of agricultural data, limited access to credit, low technology adoption, weak institutional coordination, an aging farmer population, disconnection from the tourism sector, and high inter-island costs.	The diagnostic and action plan provides important lessons on structural barriers affecting agricultural development in The Bahamas, including limited agricultural data, weak information systems, access to finance constraints, low technology adoption, limited extension services, market fragmentation, and disconnection from the tourism sector. These findings provided relevant background for proposed project's Component 1 activities and the Food Systems Master Plan, and for Component 3 activities on agribusiness training, producer support, market access, transparent pricing, and value-chain development.
Integrated Landscape Management for Addressing Land Degradation, Food Security and Climate Resilience Challenges in The Bahamas	Ongoing 2022-2026 Executors: GEF / UNEP; Executing Agency: DEPP – Ministry of Environment and Natural Resources; [93]	National Integrated Landscape Management /Land Degradation Neutrality project to strengthen climate-resilient food production in agricultural landscapes. It includes governance, regenerative agriculture, climate-smart agriculture (CSA), incentives for adoption, monitoring and knowledge management, covering 27,300 hectares across seven islands, including Andros. As of 2025, it reports progress in training on plant propagation by BAMSI, demonstration sites with CARDI, and coordination with the BDB.	This ongoing initiative provides relevant lessons for the proposed project activities under Component 1. and Component 3. This project avoids duplication by focusing specifically on Andros's food-system resilience, agro-fisheries value chains, market access, and producer support, while drawing on the landscape-management and climate-smart agriculture lessons already generated by this initiative.
Climate-Resilient Coastal Management and Infrastructure Program (BH-L1043 / Loan 4363/OC-BH)[94]	Ongoing 2018-2026 Executors: IDB associated to Ministry of Public Works & Utilities PIU	aims to strengthen resilience to coastal risks through a combination of grey and nature-based infrastructure and integrated coastal management. It supports shoreline stabilization and flood control in key locations, restoration of coastal ecosystems in Andros, and institutional strengthening for coastal risk management. The programme is expected to reduce disaster-related losses and support local economic activity.	The hybrid grey-green coastal resilience measures proposed as intervention under Component 2 in Lowe Sound are complementary to the IDB-supported programme activities. The lessons learned from this programme help reduce implementation risks and ensure that the proposed coastal infrastructure responds to validated community priorities and climate hazards.
Project "Climate Resilience of the Water Sector in The Bahamas "(GCF FP298)	Ongoing 2026-2031 Executors: Caribbean Development Bank associated execution with The Water and Sewerage Corporation (WSC) of The Bahamas	This programme will strengthen climate resilience in The Bahamas' water sector by enhancing governance and capacity building, and by deploying climate-resilient infrastructure across remote Family Islands to ensure sustainable freshwater management and protection. Key activities include providing technical assistance to strengthen the national policy, legislation, and regulatory environment, and to improve national water resources data and information for decision-making and planning; and investments in wellfields and water supply infrastructure and operations in the six Family Islands.	This programme strengthens enabling conditions for climate-resilient water management The Bahamas. The proposed project will build on these efforts by enhancing food-system resilience and ensuring that agricultural production, agro-fisheries processing, and storage activities are compatible with climate-resilient water management. Lessons were considered during project preparation: in Component 1 climate-informed planning and decision-making; Component 2 agro-fisheries infrastructure dependent on reliable water availability, and Component 3 support for water-efficient production systems, irrigation, storage and climate-smart technologies.
Marine Spatial Planning and the Caribbean Challenge Initiative (Caribbean Challenge Initiative - CCI)[95]	Ongoing 2008-2030 Executors: TNC	In The Bahamas, the CCI promotes the conservation and sustainable management of marine and coastal resources by committing the country to protect at least 20% of its nearshore marine areas through the establishment and expansion of marine protected areas. It also supports long-term sustainable financing mechanisms to ensure effective management of these ecosystems, strengthening environmental resilience and supporting key economic sectors such as fisheries and tourism. Within this framework The Bahamas established three marine protected areas, including one of the largest in the region, contributing to its goal of conserving at least 20% of marine and coastal ecosystems.	Lessons learned from this project are relevant to the proposed project's Component 1 activities on awareness raising, knowledge exchange, and dissemination, as well as Component 3 activities related to sustainable fisheries practices and livelihood resilience. The proposed project complements the CCI by strengthening the capacities of fishers and food-system actors to adopt practices that reduce pressure on marine ecosystems while supporting climate-resilient livelihoods and food security.
The Bahamas Debt Conversion Project for Marine Conservation and Climate-Smart Management Initiative (CSMP)	Ongoing 2024-2039 Executors BNT	The Bahamas debt-conversion project will provide critical funding for initiatives supporting the effective management of The Bahamas' ocean area, capacity building, and technical support. Commitments under this project include effective MPA management with climate-smart plans and the completion of a national Mangrove Management Plan to protect vital habitats like coral reefs, seagrass meadows and mangrove forests.	The project is complementary as it proposes knowledge-sharing and awareness activities under Component 1 and capacity-building actions under Component 3. This complementarity avoids duplication by focusing on producers, fishers, and local value-chain actors in Andros, while reinforcing the broader conservation and climate-smart management objectives of the debt-conversion initiative.
Renewable Energy for Sustainable and Resilient Agriculture [96]	Ongoing 2025-2030 Executors BAMSI	SOLAR-POWERED irrigation system has been piloted on a North Andros farm as part of a collaboration between BAMSI and the US-based Community and College Partners Program (C2P2) and Stanford University's Chapter of Engineers for a Sustainable World. The project aims to strengthen the capacities of farming communities through the use of renewable technologies, promoting the transfer of knowledge and practical skills. Its objective is to foster innovation and resilience in the agricultural sector by empowering farmers with sustainable tools that enhance productivity and help protect the environment for future generations.	This initiative provides practical lessons on the use of renewable energy technologies to strengthen agricultural resilience, particularly through solar-powered irrigation and farmer-oriented technology transfer. These lessons are relevant to Component 2, where the proposed agro-fisheries processing and market facility will integrate solar energy, backup capacity, and climate-resilient operations, and Component 3, where producers may receive support for solar-powered pumps, efficient irrigation, water storage, and other climate-smart technologies.

[93] Partners include Ministry of Agriculture, BAMSI, CARDI, BDB, UB, IICA, FAO, TNC, NGOs, cooperatives and private sector.

[94] IDB. (2017). *Climate Resilient Coastal Management and Infrastructure Program* (BH-L1043).

[95] United Nations Department of Economic and Social Affairs (n.d.). *Caribbean Challenge Initiative (CCI).*

[96] BAMSI. (2025, May 22). *Irrigation by Solar Power in North Andros Project*.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

Bahama Reefs Program[97]	Ongoing Phase 1: 2021-2025 Phase 2: 2026-2030 Executors: TNC	The Bahama Reefs Program is a 10-year, impact-driven conservation initiative led by The Nature Conservancy (TNC) in partnership with the Global Fund for Coral Reefs and the Bahamas Protected Areas Fund. Its goal is to reverse coral degradation, enhance marine resilience to climate change, and support coastal livelihoods	Lessons on coral reef resilience, marine ecosystem conservation, community engagement and the links between healthy reefs and coastal livelihoods provided useful reference for Component 1 awareness and knowledge-sharing activities and Component 3 sustainable fisheries capacity-building actions. The project avoids duplication by promoting sustainable fishing practices and climate-resilient livelihoods rather than financing direct coral restoration.
The Associated Farmers Programme (AFP)	Completed 2014-2019 Executors: BAMSI	The Associated Farmers Programme (AFP) is a major outreach initiative by BAMSI aimed at boosting national food security and reducing the country's high food import bill. It connects qualified, small-scale local farmers with technical support, agricultural training, and critical funding opportunities.	The Associated Farmers Programme provides important lessons on farmer outreach, technical assistance, access to finance, extension services, producer engagement, and the risks of weak transparency or long-term dependency in support programs. These lessons have informed the design of Component 3.
CultivateU Project	Completed 2024-2025 Executors: Bron Ltd. (BRON) and the Inter-American Development Bank Group (IDB Group), through IDB Lab	CultivateU aims to advance sustainable development and strengthen food security in The Bahamas by empowering small-scale farmers, including women and marginalized groups. The project will provide a comprehensive package of educational programs, guidance for corporate solar energy integration (blueprints), and access to innovative technologies. Through workshops, webinars, and hands-on learning sessions, participants will gain practical knowledge on sustainable farming practices, water conservation methods, and market opportunities. CultivateU leveraged digital platforms and local partnerships to foster collaboration, innovation, and entrepreneurship, ultimately contributing to more resilient food production and distribution systems.	The proposed intervention is complementary to CultivateU, building on its experience in climate-smart agriculture, technology transfer, producer training, and innovation promotion in The Bahamas. The project will seek to strengthen and complement the information platform through the activities proposed under Component 1.While both initiatives promote resilient agricultural practices and producer capacities, the proposed intervention has a broader scope that includes climate-informed planning, resilient infrastructure, market systems, and ecosystem-based adaptation measures, ensuring complementarity and avoiding duplication of efforts.

G. If applicable, describe the learning and knowledge management component to capture and disseminate lessons learned.

252. Knowledge management will be integrated across the project to ensure that learning, evidence, lessons and practical experiences generated in Andros inform climate-resilient food-system planning, implementation and scaling across The Bahamas. Component 4 will serve as the main learning and knowledge management pillar, while Components 1, 2 and 3 will generate technical and field-based knowledge from climate-risk information, investments in climate-resilient infrastructure, ecosystem services, producer support, capacity development, innovation, value addition and market access.
253. Knowledge will be captured through climate-risk and vulnerability assessments, project monitoring data, field observations, stakeholder consultations, beneficiary feedback, case studies and participatory learning sessions with farmers, fishers, community members, women, youth, local institutions, facility operators and value-chain actors. Particular attention will be given to documenting lessons from the implementation and operation of the climate-proofed agro-fishery processing and storage facility, hybrid green-grey coastal resilience measures in Lowe Sound, training activities, the BAMSI innovation hub, the producer support window, and value-chain and market-access interventions.
254. The Project Management Unit (PMU) will establish a systematic process for identifying, documenting, validating and tracking project experiences and lessons. The Knowledge Management Specialist will coordinate this process, working with the Component Leads, executing partners, and the project's Environmental and Social Specialist. Implementing teams will record relevant experiences, implementation challenges, emerging good practices and beneficiary feedback on an ongoing basis using standardized field-reporting and lesson-capture templates.
255. The Knowledge Management Specialist will consolidate and review this information semi-annually and maintain a knowledge and lessons register that records the lesson, its source, its relevance, any required management response, the responsible party and follow-up actions. Semi-annual reflection sessions will be held with the relevant technical and implementation teams to validate findings and identify adjustments. A broader annual learning review will synthesize lessons across all components, assess their implications for project implementation and scaling, and determine which findings should be developed into knowledge products or incorporated into policy and planning processes. Urgent or time-sensitive lessons affecting project performance, environmental and social safeguards, or beneficiary outcomes will be communicated to project management as they arise rather than being deferred until the semi-annual review.
256. Under Component 4, approximately USD 1,000,000 will support the development of an integrated information system and the systematic documentation, organization and dissemination of this knowledge. Indicatively, the project is expected to develop **10–15** knowledge products, such as technical briefs, case studies, visual factsheets, short videos or storytelling materials, policy/planning briefs and synthesis notes. It will also support around **12–20** knowledge-exchange and dissemination activities, including local workshops, community dialogues, field visits, farmer-to-farmer or fisher-to-fisher exchanges, island-to-island learning activities, national stakeholder dialogues and regional knowledge exchange opportunities. The final number and format of products and activities will be refined during the full proposal stage based on a more refined budget and considering stakeholder needs, learning opportunities and the most effective channels for reaching target groups.
257. **Evidence and lessons learned** will be organized through a digital knowledge repository or knowledge management system. The repository will store technical resources, guidelines, case studies, multimedia materials, relevant monitoring information, learning events records and validated lessons learned. The Knowledge Management Specialist will manage the repository during project implementation, including uploading and classifying materials, applying agreed metadata and version-control standards, periodically checking content quality, and ensuring that access arrangements and data-protection requirements are followed. The repository will be updated at least semi-annually, with additional uploads following the completion of major studies, learning events, knowledge products and implementation milestones.
258. To sustain the knowledge generated beyond project completion, the digital knowledge repository will form part of the unified and

[97] The Nature Conservancy. (n.d). Impact Funding for BahamaReefs: A Long-Term Solution to Coral Reef Degradation

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE
integrated climate information system developed under Activity 4.1.1 and will be aligned to the NAP MRV process. The system will be designed to be interoperable with relevant existing government and development-partner platforms. In particular, the project will assess opportunities for complementarity and data sharing with NEAPIS. During the Full Proposal stage, the Executing Entity will consult with the relevant institutions to designate the government counterparts responsible for hosting or overseeing the system and maintaining and updating the repository and its communication channels after project closure. A formal handover and sustainability arrangement will be established before project completion, specifying institutional ownership, technical administration, hosting and maintenance requirements. Designated government technical staff will be trained to administer and update the government-facing platform, stakeholder-facing interfaces and knowledge repository. The project will also establish system maintenance and content-management procedures and ensure that validated materials are available in accessible and editable formats. Project knowledge will remain accessible through digital and low-bandwidth channels and will inform the Master Plan, NAP and future investments.

259. **Knowledge products and dissemination channels** will be tailored to the needs, roles and information-use capacities of different audiences. For national institutions and decision-makers, products will be concise, evidence-based and decision-oriented, including policy briefs, planning inputs, investment notes, synthesis reports and climate risk summaries that support prioritization, coordination and integration into national planning processes. For local government bodies, implementing agencies and service providers, materials will be more operational and practice-oriented, including technical guidance, implementation lessons, checklists, standard operating procedures and operation and maintenance guidance related to resilient infrastructure, coastal resilience, producer support and service delivery. For farmers, fishers, producers and value chain actors, materials will be practical, accessible and action-oriented, using simplified language, visual formats and locally relevant examples to support the application of climate-resilient production, post-harvest management, value addition, market access and risk-informed decision-making. Dissemination will combine appropriate formats and channels, including briefs, case studies, visual factsheets, videos, storytelling products, workshops, field visits, community meetings, peer-to-peer exchanges, mobile tools, printed materials, radio, television, social media and text messages, depending on the target group and the most effective way to support uptake.

260. The project will ensure inclusive knowledge management by documenting the experiences and adaptation strategies of women, youth, persons with disabilities and informal producers. Where relevant, data and case studies will be disaggregated by sex and age, disability and other contextual relevant characteristic. Knowledge products will use inclusive language, accessible formats, and representative visuals. Learning activities will be designed to address barriers related to caregiving responsibilities, mobility, literacy, digital access and time constraints. The semi-annual knowledge reviews and annual learning exercises will assess whose experiences are being captured and whether identified lessons adequately reflect the perspectives of different beneficiary groups.

H. Describe the consultative process, including the list of stakeholders consulted, undertaken during project preparation, with particular reference to vulnerable groups, including gender considerations, in compliance with the Environmental and Social Policy and Gender Policy of the Adaptation Fund.

261. The formulation of the Resilient Food Island Project – Andros Island has been led by the Government of The Bahamas through CCEAU, with technical support from CFAN and with CAF acting as the Regional Implementing Entity to the Adaptation Fund.

262. As background for the formulation of this proposal, the initial concept drew on previous national and sectoral planning processes and technical studies, including the Andros Island Sustainable Development Master Plan and studies undertaken under the ICZM Programme. The ICZM process included technical assessments, site prioritization and previous stakeholder-engagement activities in Andros, which provided relevant inputs for the identification and further assessment of coastal-resilience measures.

263. In the framework of the formulation of this CN, **consultations were conducted through five main instances between April and June 2026**: (i) kick-off meetings and initial engagement with key national stakeholders; (ii) regular coordination meetings with CCEAU, CFAN and CAF; (iii) initial virtual bilateral consultations with key institutional stakeholders; (iv) an originating mission with site visits and stakeholder consultations, including a national scoping session in New Providence and field engagement in Andros; and (v) additional consultations and post-mission follow-up discussions.

264. During the **originating mission** carried out between **26 and 29 May 2026**, priority was given to direct engagement with stakeholders in New Providence and North Andros. The mission included a national scoping session with government agencies, technical institutions, academia, producer organizations, civil-society organizations, development partners and private-sector representatives; site visits to existing facilities and proposed project locations; meetings with local government representatives and technical institutions; a multistakeholder session with farmers, fishers and community representatives; a targeted consultation with women farmers; and informal visits to farms and fishing communities. **A total of 212 stakeholder engagement instances were recorded during the mission, including 111 involving women (52%)**. These activities provided an opportunity to validate preliminary findings, gather local perspectives on the proposed interventions and identify issues requiring further analysis.

265. With **government and technical stakeholders**, the topics addressed included climate hazards and impacts affecting food systems; the prioritization of sites and interventions; past, ongoing and planned projects; the vulnerability of communities, productive activities, infrastructure and ecosystems; lessons learned from previous programs; information gaps and monitoring needs; communication channels with local stakeholders; inter-institutional coordination; access to infrastructure, finance and technical assistance; and potential adaptation measures. These consultations provided key inputs for the refinement of the proposed project, including water-management measures for productive activities and climate-smart technologies; the strengthening of climate-resilient processing, storage and cold-chain infrastructure; greater attention to wildfire-related risks affecting agricultural production and assets; the revision of producer-support mechanisms based on lessons learned from previous programs; the assessment of resilient infrastructure for artisanal fishers; and a more integrated approach to flood-risk management in Lowe Sound.

266. Discussions with **local stakeholders** confirmed that climate variability, flooding, drought, heat, saltwater intrusion and extreme weather events are already affecting agricultural and fisheries livelihoods. Participants also highlighted structural barriers that increase vulnerability, including limited access to finance, equipment and productive assets; high operational and transportation costs; limited storage, processing and cold-chain capacity; weak market linkages; and concerns related to pricing and timely payments for produce sold to BAIC. Local consultations reinforced the importance of accessible and climate-resilient infrastructure, practical training, improved market information, transparent support mechanisms and investments that respond to the needs of

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

farmers and artisanal fishers.

267. **Gender considerations** were addressed throughout the consultation process. A specific bilateral meeting was held with the Department of Gender and Family Affairs, which highlighted the importance of ensuring equitable access to employment, livelihood opportunities, infrastructure, training and support mechanisms for women and men. The Department also recommended accessible consultation formats and targeted women-only discussions where appropriate. **During the field mission, a dedicated consultation was held with 21 women farmers**. Participants identified access to finance, equipment, technology, flexible training opportunities and improved weather and climate information as key needs. They also highlighted the additional challenges created by extreme heat and expressed interest in strengthening collaboration among women engaged in agriculture.

268. Table 6 lists all stakeholders consulted throughout the above-mentioned process. In total, 231 stakeholder engagement instances were recorded during the CN stage (53% women). These included 15 engagement instances involving external institutional stakeholders prior to the mission, 212 engagement instances recorded during the originating mission, and 4 engagement instances recorded through the BAMSI alumni and youth-related virtual consultation. As some stakeholders participated in more than one activity, these figures refer to recorded participation across consultation activities and should not be interpreted as the number of unique individuals consulted. Further details on the consultation methodology, process, participants, key issues raised and how stakeholder feedback informed the project design are provided in the Stakeholder Engagement Report.

Table 6. Stakeholders consulted during the Concept Note preparation stage.

Consultation instance / stakeholder	Date(s) and participation	Department, unit or stakeholder group	Feedback collected and incorporated in the CN
Office of the Prime Minister	15/04/2026 onwards Coordination and facilitation role; not included in the total number of external stakeholders consulted.	Climate Change and Environmental Advisory Unit (CCEAU); Sustainable Development Goals (SDG) Unit. Coordination with CAF and CFAN	• Led the national coordination of the formulation process and supported the identification of relevant stakeholders. • Provided inputs for the consultation approach, mission planning and engagement with local authorities. • Supported the progressive refinement of the project components, the Theory of Change and the proposed implementation arrangements. • Ensured alignment with national adaptation priorities and coordination with related climate-finance initiatives.
Expanded kick-off meeting with core institutional partners	23/04/2026 4 participants (50% women)	Department of Agriculture; BAMSI; BAIC; ICZM Programme.	• Reviewed the proposed formulation process and preliminary project framing. • Validated rainfall variability, freshwater constraints, saltwater intrusion and limited water-storage and distribution infrastructure as relevant issues affecting agricultural resilience. • Highlighted production and post-harvest losses associated with adverse weather conditions, mailboat delays and limited cold-chain capacity. • Provided preliminary inputs on the proposed SPMF, including location, operational and sustainability considerations. • Shared relevant information on coastal-resilience measures in Lowe Sound and identified issues requiring further technical assessment. • Informed the scheduling of follow-up bilateral consultations with relevant technical institutions and local authorities.
BAMSI	04/05/2026 Bilateral consultation: 1 participant (100% women).	BAMSI President	• Provided inputs on climate risks affecting agriculture, including freshwater pressure, saltwater intrusion, forest fires, hurricane-related losses and post-harvest constraints. • Highlighted the importance of applied research, data management, demonstration activities, training and the adoption of climate-smart technologies. • Shared lessons learned from the previous Associated Farmers Programme, which informed the refinement of producer-support mechanisms and the proposed innovation hub.
Ministry of Agriculture and Marine Resources	05/05/2026 Bilateral consultation: 1 participant (0% women).	Department of Marine Resources	• Validated climate-related risks affecting fisheries, including storms, power outages, cold-chain disruptions and damage to landing infrastructure. • Inputs informed the assessment of resilient processing and storage infrastructure and the potential upgrading of docks and ramps used by artisanal fishers. • Highlighted the importance of community ownership, youth engagement and the use of existing local structures for long-term sustainability.
Ministry of Social Services, Information and Broadcasting	05/05/2026 Bilateral consultation: 4 (100% women).	Department of Gender and Family Affairs; Community Affairs Division	• Provided inputs on the national gender-policy context and practical recommendations for gender-responsive engagement. • Highlighted the importance of equitable access to employment, livelihood opportunities, infrastructure, training and support mechanisms for women and men. • Recommended accessible meeting times, a combination of in-person and virtual engagement, and targeted women-only discussions when appropriate. • Inputs informed the preliminary gender considerations and consultation approach.
Ministry of Works & Family Island Affairs and ICZM Programme	07/05/2026 Bilateral consultation: 4 participants (25% women).	Public Works Department; ICZM Programme	• Provided inputs on post-disaster infrastructure assessment, coastal-road vulnerability, maintenance arrangements and priority infrastructure needs in Andros. • Clarified the distinction between the Davey Creek bridge project and any broader intervention involving the channel. • Confirmed the need for additional baseline studies, hydraulic modelling and environmental assessment before confirming the final approach to flood-risk management in Lowe Sound. • Shared information on previous site-selection processes, stakeholder engagement, technical studies and environmental clearances for coastal-resilience interventions in Andros. • Provided relevant background for the further assessment of the mangrove-islet intervention and related operation and maintenance arrangements. • Highlighted the need to assess climate-resilient design criteria for the proposed processing facility.
Island Administrator for North Andros	08/05/2026 Bilateral consultation: 1 participant (100% women).	North Andros Island Administration	• Identified Lowe Sound, Red Bays, Nicholls Town and Mastic Point as communities particularly exposed to climate-related disruptions. • Provided guidance on community-engagement protocols, outreach channels, suitable venues, timing and coordination with councils and township representatives. • Inputs informed the sequencing and practical organization of the Andros mission and reinforced the need for flexible engagement approaches to reach farmers and artisanal fishers.

National Stakeholder Consultation — New Providence	20/05/2026 23 stakeholder engagement instances (61% women).	Government agencies; technical institutions; academia; producer organizations; civil-society organizations; development partners; private-sector representatives.	• Validated key climate-related and structural challenges affecting food systems, including flooding, drought, saltwater intrusion, freshwater constraints, post-harvest losses, transportation and market limitations. • Highlighted the importance of climate-smart agriculture, water security, value addition, cold-chain infrastructure, research, technical capacity development and inclusive participation. • Informed the design of subsequent stakeholder-engagement activities during the mission.
Huntley Christie High School Agriculture Department	27/05/2026 2 stakeholder engagement instances (50 % woman).	Principal; Head of the Agriculture Department.	• Highlighted the importance of practical agricultural education and stronger pathways between secondary education, technical training and employment. • Identified opportunities to strengthen facilities, equipment, technology and partnerships with national agricultural institutions. • Reinforced the relevance of youth-focused training and innovation activities.
Government-coordinated site visits	27/05/2026 11 stakeholder engagement instances (64% women).	Stakeholders engaged during visits to Morgan's Bluff, Davey Creek, the ICZM mangrove-islet site, the BAIC Packing House and BAMSI facilities.	• Provided first-hand information on existing facilities, proposed project sites and infrastructure conditions. • Informed the assessment of potential SPMF locations, the climate-resilient rehabilitation of the BAIC Packing House and the proposed measures in Lowe Sound. • Identified technical issues requiring further analysis during the Full Proposal stage, including hydraulic connectivity, operation and maintenance arrangements and the final configuration of fisheries-related infrastructure.
Local government and technical institutions	27/05/2026. 14 stakeholder engagement instances (57% women).	North Andros District Council; Chief Councilor, Deputy Chief Councilor and Township Chairpersons; local representative from the Ministry of Works.	• Provided inputs on community priorities, climate-related challenges, infrastructure needs and opportunities to strengthen food-system resilience. • Highlighted the need for improved access to equipment, supplies, markets, technical support and training, as well as integrated investments in agricultural production, fisheries development, food processing, storage and cold-chain infrastructure. • Emphasized the importance of transparent market systems, improved payment mechanisms, effective grading and utilization of agricultural products, market information, equipment maintenance and food-safety standards. • Reinforced the importance of visible local benefits, long-term sustainability and continued engagement with local authorities.
Agricultural producers, fishers and community representatives	27/05/2026. 131 stakeholder engagement instances (44.3% women).	Farmers; fishers; stakeholders involved in both farming and fishing activities; other community representatives.	• Confirmed the impacts of climate variability, flooding, drought, heat, saltwater intrusion and extreme weather events on agriculture and fisheries livelihoods. • Highlighted barriers related to finance, equipment, productive assets, processing, storage, cold-chain capacity, transportation and market access. • Provided feedback on the proposed SPMF, including the climate-smart upgrade of the BAIC Packing House and possible arrangements for fisheries-related infrastructure. • Reinforced the need for practical training, transparent support mechanisms and investments that respond to the needs of farmers and artisanal fishers.
Women farmers and smallholder producers	28/05/2026. 21 stakeholder engagement instances (100% women).	Participants in the targeted women-only consultation.	• Identified finance, equipment, technology, flexible training opportunities and improved access to weather and climate information as key needs. • Highlighted the additional challenges created by extreme heat for women engaged in agriculture. • Expressed interest in strengthening collaboration, networking and knowledge-sharing among women farmers.
Farmers and fishers engaged during informal site and farm visits	28–29/05/2026. 10 stakeholder engagement instances (20% women).	Farmers; artisanal fishers; fishing-community representatives.	• Provided first-hand information on climate-related impacts affecting farms, fishing livelihoods and local infrastructure. • Highlighted existing adaptation practices, operational constraints and the need for finance, equipment and productive assets. • Provided additional feedback on the location and configuration of the proposed SPMF and related infrastructure investments.
Youth-related stakeholders	01/06/2026. 4 stakeholder engagement instances (50% women).	BAMSI alumni and stakeholders linked to agriculture, fisheries and related sectors	• Discussed barriers affecting youth participation, including access to land, finance, infrastructure, training and visible career pathways. • Highlighted the role of practical learning, innovation and stronger market linkages in attracting and retaining young people. • Inputs informed the refinement of youth-related, innovation and training activities, including the proposed BAMSI Innovation Hub

269. During the Fully Developed Proposal stage, the consultation process will be expanded and deepened to further validate the proposed activities, their technical feasibility, and the related budget and implementation arrangements. Additional engagement will be undertaken with relevant government institutions, local authorities, community-based organizations, producers, fisher groups, women's organizations, public- and private-sector stakeholders, and other actors identified during the Concept Note stage, with particular attention to vulnerable and potentially marginalized groups. The process will also support the identification and management of environmental and social risks in line with the Adaptation Fund's Environmental and Social Policy. During this stage, the Environmental and Social Management Plan, the Stakeholder Engagement Plan, the grievance mechanism, the Gender Assessment, and the Gender Action Plan will be developed and validated through further consultation.

I. Provide justification for funding requested, focusing on the full cost of adaptation reasoning.

270. The requested AF financing is justified based on the full cost of adaptation, as the project will finance the complete set of activities required to achieve the expected adaptation results in North Andros. The project is designed as a self-contained intervention and does not depend on co-financing or on the successful implementation of other donor-funded projects to deliver its Outputs and outcomes. Existing initiatives, including the IDB-financed Climate-Resilient Coastal Management and Infrastructure Program, have provided important baseline studies, preliminary engineering concepts, stakeholder validation, and implementation lessons. However, the project will finance the specific investments proposed in this CN, including design finalization, procurement, construction, ecosystem establishment, initial maintenance, monitoring, capacity building, and the institutional arrangements required for implementation.
271. Each component is necessary to achieve the project objective. The requested Adaptation Fund financing will cover the full cost of

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE
shifting Andros from a business-as-usual model toward an integrated, decentralized, and climate-resilient food system. The project will deliver concrete adaptation benefits by reducing exposure, lowering vulnerability, strengthening adaptive capacity, and creating a replicable model for climate-resilient food islands across The Bahamas.

Component 1

272. Baseline: Without AF financing, information on climate risks and evidence of impacts on the food system and food-system planning, are not developed, which constitute weaknesses in investment and production decisions in Andros. This would limit the ability of producers and local and national institutions to plan and replicate adaptation measures for climate-resilient food systems.
273. With AF funding: The project will provide comprehensive studies on climate risks and vulnerability in the food system, which will support the formulate of the Climate-Resilient and Sustainable Food Systems Master Plan and production planning.

Component 2

274. Baseline: Without AF financing, Andros' food value chains would continue to depend on inadequate infrastructure for food processing, almost non-existent cold storage capacity, and centralized logistics through New Providence, all of which increase post-harvest and post-catch losses. In Lowe Sound, coastal flooding, storm surge, and restricted water flow would continue to threaten households, fisheries infrastructure, access, and the ecosystems that sustain marine livelihoods.
275. With AF funding: The project will cover the full cost of climate-resilient food-system infrastructure and ecosystem-based coastal protection needed to reduce the exposure and vulnerability of the food system to climate hazards. These activities directly address climate-driven risks to food security, fisheries livelihoods, coastal protection, and continuity of services before, during, and after extreme events.

Component 3

276. Baseline: Without AF financing, small farmers and fishers, entrepreneurs, local producer associations, MSMEs, women, and youth would continue to face limited technical capacity, weak organization, restricted access to inputs and finance, and fragmented market linkages. These constraints would reduce their ability to adopt climate-smart practices, diversify their livelihoods, recover from climate impacts, and make effective use of resilient infrastructure.
277. With AF funding: The project will strengthen technical capacities across the food value chain and the adaptive capacity of food-system actors so that production planning and investments in infrastructure and ecosystems translate into sustained livelihood resilience. These activities will reduce climate-related losses, improve recovery capacity, promote income diversification, support innovation in climate-smart practices and the adoption of improved production practices, and ensure that vulnerable groups can access and benefit from adaptation investments.

Component 4

278. Baseline: Without AF financing, local knowledge, and lessons learned from existing initiatives would remain fragmented, inaccessible and with limited integration among climate risk, land use, food production, and ecosystem services
279. With AF funding: The project will provide the MEL and knowledge-management functions needed to ensure that investments are climate-informed, grounded in the local context, monitored over time, and that lessons learned are systematized, shared, and linked to national adaptation learning thus facilitating their replication on other islands.

J. Describe how the sustainability of the project/programme outcomes has been taken into account when designing the project/programme.

280. The project has been designed to ensure that the adaptation benefits generated in Andros can be sustained after project completion and can inform replication across other Family Islands through the broader R4R program. At concept note stage, the sustainability strategy is based on five mutually reinforcing elements:
281. The project is **aligned with national and subnational priorities** for climate resilience, food security, coastal protection and sustainable development. At the national level, it contributes to The Bahamas' adaptation agenda under the NDC 3.0, the emerging National Adaptation Plan process, and the Government's priority to strengthen climate-resilient infrastructure, local adaptive capacity and resilience across the Family Islands. At the program level, it forms part of R4R's broader approach to transform Family Islands into resilient, abundant and competitive ecozones. At the island level and the project builds on the Andros Sustainable Development Master Plan, which identifies Andros as a strategic island for food security, freshwater resources, fisheries, nature-based livelihoods and ecosystem-based development.
282. **Institutional sustainability** will be supported by embedding project activities within the mandates and ongoing work of national and local institutions. During full proposal formulation, the project will define the specific roles and responsibilities of the CCEAU under the OPM, the Ministry of Agriculture and Marine Resources, BAIC, BAMSI, Local Government authorities, environmental authorities and other relevant institutions in relation to project oversight, implementation support, operation and maintenance, environmental monitoring and post-project continuity. These arrangements will be further specified in the implementation arrangements, stakeholder engagement process and relevant safeguards documents to be developed at full proposal stage.
283. The project will also define operation and maintenance arrangements for each infrastructure asset during full proposal formulation and before commissioning.
284. **Financial sustainability** will be supported through a mixed recurrent-cost model adapted to the shared-service nature of the SPMF and other project-supported assets. The project will combine, as appropriate, public budget allocations, institutional contributions, service fees, rental or use charges for specific equipment or storage services, in-kind support from user groups, and partnerships with buyers, aggregators or MSMEs to help cover operation, maintenance and minor repair costs after project completion. These options will be further discussed, refined and formalized during full proposal formulation. Any cost-recovery mechanism will be designed with affordability and equity considerations to avoid excluding small farmers and fishers, local producer associations, women-led entrepreneurs, MSMEs, youth and vulnerable users. The full proposal will also refine the feasibility of establishing a maintenance reserve, or an equivalent mechanism, so that a portion of revenues, contributions or budget allocations is earmarked for routine maintenance and minor repairs.
285. **Economic sustainability** will be achieved by strengthening the viability of climate-resilient agricultural and fisheries value chains. The SPMF will provide shared infrastructure and services that reduce post-harvest and post-catch losses, improve handling, storage, processing and marketing conditions, and increase the capacity of small farmers and fishermen, local producer associations, entrepreneurs and MSMEs to maintain product quality under rising temperatures, more intense storms, transport

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE
disruptions and other climate-related shocks. By concentrating services in a single integrated facility, the project is expected to reduce duplication of equipment, energy systems, waste management, administration, maintenance and security across dispersed users. The project will also promote value addition, market linkages, climate-resilient business practices and circular economy opportunities, including the productive use of fish and agricultural waste for organic inputs or biofertilizer where technically, financially and environmentally feasible.

286. The project includes mechanisms for the sustained participation of private sector actors, such as farmers' and fishers' associations and other members of the agricultural and fisheries value chain. Through training in sustainable practices and business management, the project fosters knowledge exchange among farmers and fishers from other islands, promoting dialogue and market opportunities that generate new economic benefits and strengthen the project's sustainability. Following implementation, it is expected that the strengthened capacities of small-scale farmers and fishers, local producer associations, and supported businesses and MSMEs will help maintain these connections, reinforced by agreements and partnerships fostered during the implementation phase.

287. **Social sustainability** will be supported through inclusive participation, local ownership and practical capacity building. Small farmers and fishers, local producer associations, entrepreneurs, MSMEs women, youth and vulnerable households will be involved in the design, implementation and monitoring of activities through consultations, training processes and feedback mechanisms. During full proposal formulation, the project will further define the arrangements to ensure equitable access to project benefits, including access to the SPMF, training, market-linkage activities and livelihood support. These arrangements will include measures to reduce the risk of elite capture or exclusion of smaller and more vulnerable users, such as transparent eligibility criteria, gender-responsive outreach, targeted support to women farmers and women-led enterprises, and to promote the participation of youth and other vulnerable groups in capacity-building activities and access to other project assets and benefits.

288. Community members and key stakeholders have been actively involved in the project's design and planning phases and will continue to play a central role throughout implementation and monitoring phase. In this regard, the project will support through participatory mapping (next stage of project formulation) the community's interest and commitment to engaging in a community-based monitoring process through on-site surveys and use of software and technology to monitor key environmental, ecological and biodiversity indicators[98]. This process, besides building local skills and capacities within the community, can also provide an avenue to ensure long-term monitoring and reporting of key indicators, while reducing long-term costs associated to this process[99].

289. **Environmental sustainability** will be ensured through compliance with the Adaptation Fund Environmental and Social Policy, CAF's environmental and social safeguards, and applicable national environmental requirements. The project will avoid maladaptation by ensuring that infrastructure and ecosystem-based measures do not increase exposure, degrade habitats, reduce access to resources or transfer risk to other communities. For the SPMF, the full proposal will define environmental management measures related to waste management, fish waste handling, water-use efficiency, energy-efficient equipment, renewable energy integration where feasible, pollution control and protection of soil, groundwater and coastal ecosystems. For agricultural activities, the project will promote climate-resilient and environmentally sound practices, including efficient water use, soil conservation, reduced post-harvest losses and practices that reduce pressure on fragile freshwater lenses and coastal ecosystems.

290. The mangrove islets in Lowe Sound will contribute to the long-term sustainability of coastal protection benefits. The intervention will use engineered substrates such as conch shells, gravel and sand to support mangrove establishment and enhance protection against storm surge and tidal flooding. The full proposal will further define the detailed design, implementation sequence, maintenance requirements and monitoring protocol for the mangrove islets.

291. **Knowledge management will support sustainability**, replication and scaling up. The project will document technical designs, training materials, business and management models for shared food-system infrastructure, safeguards procedures and lessons learned from implementation in Andros. These knowledge products will be shared with national institutions, local governments, R4R stakeholders and other Family Islands to support future replication. The Andros pilot will therefore serve not only as a local adaptation investment, but also as a demonstration model for scaling climate-resilient food systems, coastal protection and locally owned adaptation planning through future public investment, climate finance and development partner support.

292. By the end of the project, sustainability is expected to be reflected in: (i) operational infrastructure with defined ownership, management and maintenance arrangements; (ii) trained users and institutions able to continue climate-resilient production, processing, storage and marketing practices; (iii) functioning local coordination and feedback mechanisms; (iv) environmental management and monitoring protocols for infrastructure and ecosystem-based measures; (v) documented models and lessons for replication through R4R; and (vi) identified financial sources or mechanisms to cover recurrent costs after AF financing ends. The specific institutional, operational and financial arrangements will be confirmed during full proposal formulation and reflected in the final project design.

K. Provide an overview of the environmental and social impacts and risks identified as being relevant to the project/programme.

293. The preliminary analysis of the Project's impacts and risks follows the AF's Environmental and Social Policy and Principles, and CAF's Environmental and Social Safeguards. Based on the location, type, scale of the intervention and nature of the project activities, the project has been classified as a **Category B** project. The potential adverse environmental or social risks and/or impacts are few in number, generally site-specific, largely reversible, and readily addressed through appropriate mitigation measures. A detailed impact assessment and mitigation plan will be developed for the full proposal. Under Component 2, output "*2.1.2 Implement hybrid green-grey flood mitigation and coastal ecosystem buffer measures to protect Lowe Sound's fishing livelihoods and critical access routes*" has been classified as an **USP**. This USP corresponds to a **"Partially Unidentified",** where the **specific location has been identified, but concrete activities are yet to be determined**. This **USP** requires a combination of hybrid grey and green nature-based solutions to mitigate flood risks at Lowe Sound, through an integrated approach that

[98] Examples include, but are not limited to, fauna and vegetation diversity and distribution; species composition or richness; vegetation structure; water and soil physio-chemical variables; the use of software and technology to monitor canopy cover, tree density and habitat connectivity and other relevant indicators.

[99] Transformative Pathways. (2024). *Introduction to Community-Based Environmental Monitoring: Practical Guidance for Monitoring Natural Resources by Indigenous Peoples and Local Communities*.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

manages the entire tidal creek and wetland system as a retention and coastal exchange zone. For this, complementary site-specific studies such as hydrological and hydraulic modelling, land surveys will be carried out to support the identification of appropriate local adaptation solutions. Under Component 3, *"Activity 3.1.3 Establishment of a Climate-Resilient Food System Support Window for Producers"* corresponds to a "**Partially Unidentified**", **specific activity identified, location to be determined**, the activities and potential small-scale investments have been identified, however the specific location of the land parcels is yet to be determined. Special attention will be given to ensure the potential E&S risk and impacts of the eligible small-scale investments are within Category B rating.

294. All USPs will be managed in accordance with the requirements of the AF's Environmental and Social Policy (ESP) and Gender Policy. In this regard, USPs will undergo environmental and social screening to identify potential risks and impacts, and to develop, implement and monitor appropriate mitigation measures. During the Full Proposal preparation stage, the ESMP will include a more thorough description of the potential E&S risk associated with the project activities, as part of the due diligence process, the corresponding mitigation measures will be established, and the results will be socialized with the communities and corresponding authorities.

295. The preliminary environmental and social risk identification presented below (Table 7) was informed by a review of relevant climate-risk, land-use, biodiversity, and agricultural technical sources[100] as well as by the Initial Gender Assessment and stakeholder consultations undertaken during project preparation. The consultations provided locally grounded information on community vulnerabilities, access and equity considerations, livelihood dependencies, gender-related barriers, potential impacts on vulnerable groups, and stakeholder concerns regarding the proposed interventions. Further information on the consultation methodology, participating stakeholders, gender-disaggregated participation, issues raised, and how stakeholder feedback informed the project design and preliminary environmental and social risk screening is provided in the Stakeholder Engagement Report.

Table 7. Environmental and social screening

Checklist of environmental and social principles	No further assessment required for compliance	Potential impacts and risks – further assessment and management required for compliance
Compliance with the Law		**Low risk.** There is a potential risk of non-compliance with applicable law and regulations if permits and/or licenses are not obtained prior to the commencement of construction or operation; or if contractors or sub-contractors fail to secure or renew the necessary permits in a timely manner. During the project design phase, the main permits/licenses, have been identified, compliance with applicable relevant international agreements, and standards have been contemplated. **Mitigation measure**: E&S compliance will be monitored throughout the project lifecycle. Under Component 2, which include the construction and operation of the SPMF and the hybrid green-grey measures, no construction, rehabilitation or operational activity will commence until all applicable regulatory requirements have been fulfilled. Project activities will also be closely coordinated with relevant ministries and regulatory agencies. An ESMP will be prepared during the FP stage and updated when USP are defined. An E&S risk assessments will be conducted for all USPs to ensure compliance with national legislation, relevant international standards, and the Adaptation Fund's ESP and the Gender Policy.
Access and Equity		**Medium risk**. There is a risk of potential competition for natural resources (e.g. fresh water, productive land) among certain users groups or production sectors; along with unequal opportunities for small-scale producers, women, youth, or fishers to use processing, storage, or marketing facilities. **Mitigation measures:** The project will develop transparent and equitable beneficiary selections criteria, that consider main barriers identified and will monitor participation and benefit distribution collection age and sex-disaggregated data among other variables. An accessible and inclusive grievance mechanism will be established and disclosed with communities, project beneficiaries, workers and other stakeholders, to raise concerns, complaints or suggestions regarding project activities.
Marginalized and Vulnerable Groups		**Medium risk.** There is a risk that marginalized and vulnerable groups including women, youth, elderly persons, persons with disabilities and/or immigrants may face barriers to participate or benefit from project activities, or participate in decision-making processes. Haitians or citizens of Haitian descent are among the largest ethnic minorities in the country and are often employed in the service-sector jobs, construction and farms. **Mitigation measures:** Under Component 1, include the identification of vulnerable population and sites (location) to provide for tailored adaptation solutions (Component 2 and 3) that take environmental and social context. Inclusive stakeholder consultation process will continually be carried out, sharing relevant project information. The Project will closely monitor compliance with the Project's Gender Action Plan and the ESMP.
Human Rights		**Low risk.** There is a risk of non-compliance with established human rights principles, including non-discrimination, freedom of association and equitable access to the project's benefits. While the Project incorporates a human rights-based and people-centered approach, some risk still exist. **Mitigation measure:** Through the project lifecycle, particular attention will be given to protecting and promoting human rights of small-scale fishers and farmers, workers and their communities, while taking into account the needs and barriers that vulnerable and marginalized groups often face.
Gender Equity and Women's Empowerment		**Medium risk.** There is a risk that women and female-headed households face unequal opportunities to participate in or benefit from project activities due to persistent gender inequalities, where women remain underrepresented in agricultural and fishery sector and they carry with unpaid care responsibilities that constrain access to training, consultations, and leadership opportunities. **Mitigation measures**: The project will establish inclusive beneficiary selection criteria to ensure equal access to the project resources and benefits. A more detailed assessment on gender related issues, including the integration of safe GBV (gender-based violence) referral pathways; and targeted consultations with stakeholders will take place and integrated within the full Gender Assessment and Gender Action Plan that will be prepared during full proposal development.
Core Labour Rights		**Moderate risk**. There is a risk that workers, farmers/fishers are exposed to occupational health and safety hazards associated with agriculture & fishery, construction and operation of the SPMF, including exposure to physical, chemical, biological and ergonomical hazards, heat stress, dust, noise and machinery or equipment-related injuries. Above mentioned risks are mostly relevant for Project's Component 2 and 3. Additionally there is a risk of non-compliance with ILO Labor Standards on child labor if workers below the minimum age (15 years) established under ILO Convention No. 138 are engaged directly or indirectly through

[100] Key technical sources reviewed included: Le Groupe-conseil Baastel. (2023, December 15). Climate Risk and Vulnerability Assessment for Coastal Ecosystems and Communities of The Bahamas: Final Report. Prepared for the Government of The Bahamas and the Green Climate Fund; FAO & IPPC. (2021). Scientific Review of the Impact of Climate Change on Plant Pests; IDB. (2022). North Andros Urban Land Use Plan Pilot Project [Draft pilot]; Liu, Y. H., & Tsai, J. H. (2000). "Effects of Temperature on the Biology and Life Table Parameters of the Asian Citrus Psyllid, Diaphorina citri Kuwayama." Annals of Applied Biology; and Key Biodiversity Areas. (2026). KBA Map.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

		contractors or suppliers, given that national legislation permits employment from 14 years of age. **Mitigation measure:** The project staff, contractors and subcontractors, shall adhere to applicable labor laws and standards. Employment relationships will be based on the principle of equal opportunity and fair treatment, and non-discrimination. A proportionate ESMP will be established to minimize occupation related risk, and ensure minors are not employed in hazardous works or in any activity prohibited under national legislation and applicable international standards. A grievance mechanism will be set in place to enable workers (including contractors and subcontractors) to raise complaints or concerns related to their working conditions.
Indigenous Peoples	X	**No risk.** In the area of influence there are no indigenous communities territorialized or living in communities. The original indigenous inhabitants of the Bahamas are the Lucayan people, a branch of the Taino/Arawak. They were largely wiped out following European contact. In this regard, there are no distinct, recognized indigenous communities residing in the Bahamas.
Involuntary Resettlement	X	**No risk**. The project will not involve land acquisition, physical or economic displacement, voluntary or involuntary resettlement, or restrictions on land use and access to natural resources. The project activities will not take place in areas/land which may have land tenure issues and if land titles are not clear; nor in ancestral lands/domains, or areas considered as culturally important areas. Based on climate risk and vulnerability assessments, the project (Component 1) will support planning and zoning processes that incorporate climate, environmental, socioeconomic, and gender equality considerations to identify priority areas, production systems, and stakeholder groups that are most exposed to climate risks and best suited for climate-resilient intervention.
Protection of Natural Habitat		**Moderate risk**. There is a risk of temporary degradation of natural habitats due to earthworks mainly under activities under Outcome 2 (rehabilitation and expansion of the SPMF and implementation of hybrid green-grey coastal resilience measures); risk of water pollution, soil erosion, and sedimentation. The project activities are consistent with the Bahamian approved land-use planning and will avoid unjustified land conversion. There is a risk that project activities could affect mangroves, wetlands, coastal ecosystems, and other sensitive habitats. For USP, Activity 2.1.2, the general location is known, but the final design and exact footprint are still to be confirmed. Similarly, for Activity 3.1.3, risks will depend on the plots selected. **Mitigation Measure:** The project activities will not be implemented within protected areas or sites of international significance (e.g. Bird and Biodiversity Areas, Alliance for Zero Extinction sites, and Key Biodiversity Areas. The selection and prioritization of the agricultural land where CSA practices will take place will be coordinated/selected with support of BAMSI. A proportionate ESMP will be developed during the FP stage and updated when the USP are defined, including clear responsibilities and the monitoring of key indicators.
Conservation of Biological Diversity		**Moderate risk**. There is a risk of soil and water contamination resulting from accidental spills or improper handling of fuels, oils, construction materials, agricultural inputs, or other hazardous substances. These could result in temporary impacts on terrestrial and aquatic biodiversity during the construction and rehabilitation phase under Outcome 2, (rehabilitation of the SPMF facility and the implementation of hybrid green-grey measures) which involve earthworks. Additionally, there is a risk of accidental dispersal of invasive species associated with mangrove restoration activities; if not adequately managed, these risks could adversely affect habitats. USP risks: There is a risk of impacts on species of conservation concern, biodiversity, and ecologically sensitive areas. These risks will be further assessed once the final design of Activity 2.1.2 and the specific sites for Activity 3.1.3 are confirmed. **Mitigation measures:** A proportionate ESMP will be established and once UPS are defined, updated, to minimize environmental risk associated with project activities, responsibilities and monitoring of key indicators, including regular site inspections during construction works and operation phase. The Project will also implement good agricultural practices and ensure compliance with national biodiversity plans and regulations, as well as the AF's ESP and Gender Policy.
Climate Change	X	**No risk**. The project has an adaptation focus and takes into consideration current and future climate scenarios and will undertake complementary vulnerability mapping (Component 1). During the construction/rehabilitation of the SPMF and the establishment of hybrid green-grey flood mitigation and coastal ecosystem (under Component 2), limited and temporary GHG emissions are expected from construction activities and transportation of materials and equipment. These emissions are anticipated to be short-term and localized. The project also incorporates nature-based solutions such as mangrove restoration together with climate-smart agricultural and resilient practices. In this regard, the project is not expected to result in significant increase of GHG emissions.
Pollution Prevention and Resource Efficiency		**Moderate risk.** There is a risk of soil, air and water contaminating resulting from the improper use, handling, storage and accidental spills of agricultural inputs other chemicals (cleaning, refrigerants, fuels) that could be used within the SPMF; which may also pose risks to workers and the local communities. Project activities may increase demand for freshwater resources may lead to water-use competition and availability. Food processing activities can generate wastewater and solid waste, and increased demand for water and energy resources. **Mitigation measures:** The SPMF incorporates sustainable design principles to reduce environmental impacts and optimize natural resources, by promoting use of renewable energy sources and energy-efficient equipment, water-efficient processes, environmentally friendly construction materials, waste and wastewater management processes. At farm-level the project promotes sustainable and climate-smart production practices. ESMP compliance will be closely monitored.
Public Health		**Moderate risk.** There are potential risks related to the ingestion of hazardous substances in beef, pork, fish and other animal products and by-products; primarily associated with post-harvest activities (handling, processing and commercialization of raw and process food) within the SPMF. Additional risk related to potential exposure to pesticides (e.g., spray drift, improper disposal and use of packaging and containers) and presence of pesticides or by-products in postharvest products. **Mitigation measures:** the project will comply with national and international food quality safety standards consistent with the principles and practices of the Hazard Analysis and Critical Control Points (HACCP) system and the Codex Alimentarius will be promoted, along with other good international industry practices (GIIP). Additional measures will be established in the ESMP to monitor and verify that food and animal establishments comply with require permits and standards; and that workers have adequate training and skill on related aspects.
Physical and Cultural Heritage		**Low risk.** There is a potential risk of affecting unknown or previously unidentified physical or cultural heritage resources during dredging, excavation, rehabilitation, land preparation or other site-specific works. No known physical or cultural heritage resources have currently been identified within the preliminary intervention areas. However, for Activity 2.1.2, this conclusion will be confirmed once the final technical configuration and exact intervention footprint have been defined. Similarly, for Activity 3.1.3, potential impacts will be assessed through environmental and social screening following the identification of the specific plots. The project will consult relevant authorities and local communities, as appropriate, and a chance-find procedure will be incorporated into the ESMP, bidding documents and works contracts. If archaeological, historical, cultural or sacred resources are encountered, works will be suspended and the competent authority will be notified before activities resume.
Lands and Soil Conservation		**Moderate risk.** There is a potential risk of soil contamination resulting from the inappropriate implementation or adoption of agricultural technologies and practices. Additional risks may arise from the improper handling, storage, or disposal of by-products, solid waste, and wastewater generated by the SPMF. **Mitigation measures:** The project promotes an integrated approach to the adoption of Climate-resilient agriculture practices and technologies by providing tailored technical assistance, capacity building, and regular supervision and monitoring to farmers and fishers. The SPMF will incorporate appropriate design features and operational procedures to minimize environmental impacts associated with solid waste and wastewater management.

PART III: IMPLEMENTATION ARRANGEMENTS

A. Demonstrate how the project/programme aligns with the Results Framework of the Adaptation Fund

Table 8. Project alignment with the Results Framework of the Adaptation Fund

Project outcome(s)	Project Outcome Indicator(s)	Adaptation Fund Outcome	Adaptation Fund Outcome Indicator	Grant Amount (USD)
1. Strengthened local planning for evidence-based decision-making for climate-resilient food systems	Climate-Resilient and Sustainable Food System Master Plan for Bahamas validated through a participatory process	**Outcome 7**: Improved policies and regulations that promote and enforce resilience measures	Indicator 7: Policies, strategies, and/or plans adopted, implemented, and/or enforced that integrate climate risk and resilience considerations [#, disaggregated by scale, by policy step, and by sector]	500,000
2. Climate-resilient infrastructure and ecosystem services strengthened to support resilient food systems	Number of infrastructure points and km of linear infrastructure for the agriculture and fisheries sector improved or constructed to withstand climate shocks.	**Outcome 4:** Increased adaptive capacity within relevant development sector services and infrastructure assets	Indicator 4 (Core Indicator 3): Physical assets improved or constructed to withstand climate variability and change [disaggregated by km of linear infrastructure and # of point infrastructure, and by sector]	8,511,521
3. Adaptive capacities of farmers, fishers and food system actors strengthened for climate-resilient production, value addition and market access	Number of fisherfolk, farmers and market value chain actors with improved practices, processes or market opportunities for resilient food systems	**Outcome 6:** Diversified and strengthened livelihoods and sources of income for vulnerable people in targeted areas	Indicator 6A: People adopting improved and/or new climate-resilient livelihood practices [# of people, disaggregated by sex and by vulnerable groups]	2,500,000
4. Knowledge management and learning systems strengthened to support climate-resilient food system decision-making and scaling	Number of people disaggregated by sex and vulnerable groups with increased awareness of climate risks in Bahamas and appropriate measures to adopt resilient food systems	**Outcome 3**: Strengthened awareness and ownership of adaptation and climate risk reduction processes	Indicator 3A: People with strengthened awareness of climate change risks and how to better address them	1,000,000
Total outcome level grant amount				**12,511,521**
Project Output(s)	**Project Output Indicator(s)**	**Adaptation Fund Output**	**Adaptation Fund Output Indicator**	**Grant Amount (USD)**
1.1. Improved climate-informed planning instruments for resilient food systems	Climate-Resilient and Sustainable Food Systems Master Plan developed integrating climate risks	**Output 7.1**: Improved integration of climate-resilience strategies into country development plans	Indicator 7.1A (Core Indicator 6): Policies, strategies, and/or plans developed or adjusted to integrate climate risk and resilience considerations [# of policies, strategies, and/or plans, disaggregated by scale and by sector]	500,000
2.1. Critical food system infrastructure and coastal ecosystem buffers enhanced to reduce climate-related disruptions in Andros	Number of climate resilient infrastructure sector-services strengthened to withstand climate shocks, for the agriculture and fisheries sector	**Output 4.1**: Vulnerable development sector services and infrastructure assets strengthened in response to climate change impacts, including variability	Indicator 4.1: Development sector services strengthened to respond to climate variability and change [# of sector services, disaggregated by sector and by scale]	8,511,521
3.1. Climate-resilient training, innovation and producer support services established for farmers, fishers and food system actors	Number of fisherfolk, farmers and value chain actors receiving support to improve their capacities to manage climate risks in the agriculture and fisheries sector	**Output 6.1**: Targeted individual and community livelihood strategies strengthened in relation to climate change impacts, including variability	Indicator 6.1: People receiving targeted support for new and/or improved livelihoods to manage climate risk [# of people, disaggregated by sex and by vulnerable groups]	2,500,000
4.1: Knowledge sharing, learning exchanges, and multi-stakeholder dialogue facilitated to strengthen climate-resilient food systems	Number of knowledge products on resilient food systems developed and disseminated with key stakeholders	**Output 3.2:** Strengthened capacity of national and subnational stakeholders and entities to capture and disseminate knowledge and learning	Indicator 3.2: Climate resilience knowledge products and/or tools developed and shared with stakeholders [# of products/tools, by sector]	1,000,000
Total output level grant amount				**12,511,521**

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

PART IV: ENDORSEMENT BY GOVERNMENT AND CERTIFICATION BY THE IMPLEMENTING ENTITY

A. **Record of endorsement on behalf of the government**[2] *Provide the name and position of the government official and indicate date of endorsement. If this is a regional project/programme, list the endorsing officials all the participating countries. The endorsement letter(s) should be attached as an annex to the project/programme proposal. Please attach the endorsement letter(s) with this template; add as many participating governments if a regional project/programme:*

Mrs. Rochelle Newbold *Director* *Climate Change and* *Environmental Advisory Unit* *Office of the Prime Minister*	Date*: 09/11/2026*

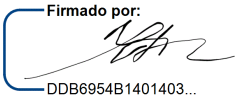
B. **Implementing Entity certification** *Provide the name and signature of the Implementing Entity Coordinator and the date of signature. Provide also the project/programme contact person's name, telephone number and email address.*

I certify that this proposal has been prepared in accordance with guidelines provided by the Adaptation Fund Board, and prevailing National Development and Adaptation Plans (……list here…..) and subject to the approval by the Adaptation Fund Board, commit to implementing the project/programme in compliance with the Environmental and Social Policy and the Gender Policy of the Adaptation Fund and on the understanding that the Implementing Entity will be fully (legally and financially) responsible for the

[6.] Each Party shall designate and communicate to the secretariat the authority that will endorse on behalf of the national government the projects and programmes proposed by the implementing entities.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

<table>
<tr><td colspan="2">Implementing Entity Coordinator
Ignacio Lorenzo
Director
Technical Advisory Directorate on Biodiversity and Climate
CAF- Development Bank of Latin American and the Caribbean

Firmado por:

DDB6954B1401403...</td></tr>
<tr><td>Date: 09/11/2026</td><td>Tel. and email: +59899180424 // ilorenzo@caf.com</td></tr>
<tr><td colspan="2">Project Contact Person:
Sebastian Rodríguez
Principal Executive
Technical Advisory, Directorate on Biodiversity and Climate
CAF-Development Bank of Latin American and the Caribbean</td></tr>
<tr><td colspan="2">Tel. And Email: +573105060516 // srodriguez@caf.com</td></tr>
</table>

No. OPM/CCC/ADF

OFFICE OF THE PRIME MINISTER
Sir Cecil Wallace Whitfield
Centre

Nassau, New Providence
The Bahamas
Tel: (242) 702-5500

25 June 2026

The Adaptation Fund Board
c/o Adaptation Fund Board Secretariat
Email: Secretariat@Adaptation-Fund.org
Fax: 202 522 3240/5

Dear Secretariat,

RE: Endorsement for R4R-02: Resilient Food Island - Enhancing Local Adaptive Capacity of Andros Island for Climate-Resilient and Sustainable Food Systems.

In my capacity as designated authority for the Adaptation Fund in The Bahamas, I confirm that the above national grant proposal is in accordance with the government's national priorities in implementing adaptation activities to reduce adverse impacts of, and risks, posed by climate change in The Bahamas.

Accordingly, I am pleased to endorse the above grant proposal with support from the Adaptation Fund. If approved, the project will be implemented by Corporación Andina de Fomento (CAF) and executed by Office of the Prime Minister-Climate Change and Environmental Advisory Unit.

Sincerely,

Mrs. Rochelle W. Newbold
Director
Climate Change and Environmental Advisory Unit
Office of the Prime Minister
Email: rochellenewbold@bahamas.gov.bs;

Initial Gender Assessment (v.2)

R4R-02: Resilient Food Island - Enhancing Local Adaptive Capacity of Andros Island for Climate-Resilient and Sustainable Food Systems

The Bahamas | Adaptation Fund Concept Note stage

Note on this condensed version. This document summarizes the longer Initial Gender Assessment originally submitted with the Concept Note and has been condensed to comply with the Adaptation Fund page limit. In the first Concept Note submission, gender considerations were integrated across the relevant sections of the Concept Note. Following the Fund technical review recommendation, that analysis has been extracted, consolidated and presented as a separate annex, now summarized to fewer pages.

1. PURPOSE, SCOPE AND METHODOLOGY

This Initial Gender Assessment identifies the principal gender-differentiated vulnerabilities, capacities, barriers and opportunities relevant to the proposed adaptation intervention. It is aligned with the Adaptation Fund Gender Policy and Gender Guidance and is intended to inform full proposal design; it does not constitute a Gender Action Plan.

The assessment draws on the gender and social inclusion analysis undertaken during Concept Note preparation; national census, policy and climate-vulnerability information; consultations held between April and June 2026; the May 2026 originating mission; and a dedicated consultation with women farmers. A full Gender Assessment and Gender Action Plan will be prepared during full proposal development, supported by additional sex-, age- and disability-disaggregated data and targeted consultations.

2. GENDER AND SOCIAL INCLUSION CONTEXT

Andros has 7,695 inhabitants, 50.3 percent of whom are women. Poverty is estimated at 17.3 percent, above the national average, while 42 percent of households nationally are female-headed. The prevalence of persons with disabilities in Andros (4.37 percent) is also higher than the national average, and many face limited insurance coverage and barriers to services, warnings, evacuation, training and project benefits.

Women generally achieve stronger educational outcomes than men but continue to face unequal labour-market outcomes and remain underrepresented in technical and vocational occupations. Agriculture and fisheries are male-dominated at the primary production level, while women are active - often informally and with limited visibility - in processing, vending, marketing, administration, crab harvesting and small-scale food transformation. Their lack of formal registration can restrict access to producer organizations, finance, insurance, public support and recovery mechanisms. Women also carry disproportionate unpaid care responsibilities, which can limit participation in training, consultations and leadership opportunities.

3. GENDER-DIFFERENTIATED CLIMATE VULNERABILITY AND IMPACTS IN ANDROS

Gender-differentiated climate risks in Andros arise from the interaction between low-lying exposure, remoteness, fragmented transport links and gendered livelihood roles. In North Andros and coastal settlements such as Lowe Sound, hurricanes, storm surge, flooding and saline intrusion can damage homes, farms, fishing assets, roads, docks, storage and processing facilities. Women-led and low-income households may have fewer resources for temporary relocation and recovery, while persons with disabilities and older people can face additional barriers to warnings, evacuation and access to essential services.

Climate impacts also affect women through their roles in processing, vending, marketing, administration and household care. When landing sites, cold storage, transport routes or markets are disrupted, women may lose income even where crops or catches survive, while household food, water and care burdens increase. Extreme heat is a particular concern in processing and administrative facilities such as the BAIC Packing House, where inadequate insulation, ventilation and cooling may create occupational health risks, especially for women workers and pregnant women.

4. KEY GENDER FINDINGS AND IMPLICATIONS FOR PROJECT DESIGN

Key finding	Implication for full proposal design
Women are active across food value chains, but many roles are informal or absent from producer records.	Map formal and informal roles and ensure that registration, tenure or business-documentation requirements do not exclude eligible women.
Women, female-headed households, youth and low-income producers often have more limited access to assets, finance, credit and insurance.	Assess affordability and financial-access barriers and establish transparent, low-burden arrangements for infrastructure and productive support.

Key finding	Implication for full proposal design
Unpaid care responsibilities and dispersed settlements constrain women participation in training, consultations and leadership.	Use flexible schedules, accessible locations and delivery formats that address mobility, transport, connectivity and caregiving constraints.
In North Andros, women are concentrated in processing, vending and administrative roles and may face heat exposure in facilities such as the BAIC Packing House, as well as income losses when docks, cold storage, transport routes or markets are disrupted.	Integrate heat stress, ventilation, cooling, occupational safety and continuity of access into facility and infrastructure design.
Andros' dispersed settlements, remoteness and fragmented transport links can intensify barriers faced by persons with disabilities, older persons, youth and isolated communities in accessing warnings, evacuation, facilities, training and grievance mechanisms.	Apply universal-access principles and ensure accessible communication, consultation, infrastructure and grievance channels.
Shared infrastructure and support could be captured by formally registered or better-connected actors.	Define transparent eligibility, governance, pricing, targeting and monitoring arrangements to prevent exclusion and elite capture.
Women are already applying diversification, intercropping, drip irrigation and market innovations.	Recognize women as producers, entrepreneurs, innovators and knowledge holders, not only as vulnerable beneficiaries.
Displacement and shelter use may increase safety and GBV risks, particularly for women and girls with disabilities.	Integrate confidential and gender-responsive safety considerations, referral pathways and grievance procedures into project safeguards and disaster planning.

5. CONSULTATION FINDINGS RELEVANT TO GENDER

Gender considerations were addressed throughout the Concept Note consultation process. Consultations took place between April and June 2026 through kick-off meetings, coordination meetings with OPM/CCEAU, CFAN and CAF, virtual bilateral consultations, an originating mission with site visits and stakeholder consultations in New Providence and North Andros, and post-mission follow-up discussions.

During the May 2026 originating mission, the project team engaged government agencies, technical institutions, academia, producer organizations, civil-society organizations, development partners, private-sector representatives, local government representatives, farmers, fishers and community members. A total of 212 stakeholder engagement instances were recorded during the mission, 52 percent involving women. Across the Concept Note stage, 231 stakeholder engagement instances were recorded, 53 percent involving women. These figures refer to recorded participation rather than unique individuals.

A dedicated bilateral meeting with the Department of Gender and Family Affairs highlighted the importance of ensuring equitable access to employment, livelihood opportunities, infrastructure, training and support mechanisms for both women and men. The Department also recommended accessible consultation formats and women-only discussions where appropriate.

A dedicated consultation with 21 women farmers was conducted during the field mission. Participants identified access to finance, equipment, technology, flexible training opportunities and improved weather and climate information as key needs. They also highlighted the additional challenges created by extreme heat and expressed interest in strengthening collaboration among women engaged in agriculture. These findings indicate the need for project design to address the practical constraints that affect women participation, including timing, location, care responsibilities, information access, financing requirements and formal registration barriers.



Meeting with group of women farmers, 28 May 2026

6. PRIORITIES FOR THE FULL PROPOSAL STAGE

Full proposal preparation will deepen the assessment through disaggregated baseline data; targeted value-chain mapping and consultation with women, youth, persons with disabilities, fishers, farmers, informal producers and low-income households; analysis of access, affordability, tenure and documentation barriers; assessment of institutional gender capacity and safe GBV referral pathways; and validation of accessible stakeholder engagement and grievance mechanisms. The findings will be translated into a Gender Action Plan with activities, indicators, targets, responsibilities and budget.

Source note: Prepared from the Concept Note evidence base, including the 2022 Population and Housing Census, national gender and climate policy documents, previous vulnerability and gender assessments, and stakeholder consultations conducted between April and June 2026.

viridia projects

Race for Resilience (R4R) Program for the Family Islands of The Bahamas Resilient Food Island Project-Enhancing Local Adaptive Capacity of Andros Island for Climate-Resilient and Sustainable Food Systems

STAKEHOLDERS ENGAGEMENT REPORT

CAF BANCO DE DESARROLLO DE AMÉRICA LATINA

8 June 2026

TABLE OF CONTENTS

1. INTRODUCTION 3

2. DESCRIPTION OF THE CONSULTATION PROCESS 4

2.1 KICK-OFF MEETINGS WITH KEY NATIONAL STAKEHOLDERS 4
2.1.1 KICK-OFF MEETING WITH CAF, OPMCCU-CCEAU, CFAN, AND VIRIDIA PROJECTS 4
2.1.2 EXPANDED KICK-OFF MEETING WITH CORE INSTITUTIONAL PARTNERS 4
2.2 REGULAR COORDINATION MEETINGS WITH OPMCCU-CCEAU, CAF, CFAN AND VIRIDIA PROJECTS 5
2.3 INITIAL BILATERAL MEETINGS WITH KEY STAKEHOLDERS 5
2.3.1 MEETING WITH BAMSI 5
2.3.2 MEETING WITH DEPARTMENT OF MARINE RESOURCES 5
2.3.3 MEETING WITH DEPARTMENT OF GENDER AND FAMILY AFFAIRS 6
2.3.4 MEETING WITH THE MINISTRY OF WORKS & FAMILY ISLAND AFFAIRS AND THE ICZM PROGRAMME 6
2.3.5 MEETING WITH THE ISLAND ADMINISTRATOR FOR NORTH ANDROS 6
2.4 ANDROS MISSION WITH SITE VISITS 6
2.4.1 OPENING NATIONAL STAKEHOLDER SESSION 7
2.4.2 SITE VISIT/ MEETING WITH HUNTLEY CHRISTIE HIGH SCHOOL AGRICULTURE DEPARTMENT 8
2.4.3 GOVERNMENT COORDINATED SITE VISITS/TOUR 8
2.4.4 MEETING WITH LOCAL GOVERNMENT AND TECHNICAL INSTITUTIONS 11
2.4.5 MULTISTAKEHOLDER SESSION FOR ANDROS-BASED STAKEHOLDERS 12
2.4.6 INFORMAL SITE VISITS WITH FARMERS AND FISHERS 13
2.4.7 INFORMAL MEETING WITH WOMEN FARMERS 14
2.4.8 INFORMAL SITE VISITS WITH FARMERS 15
2.5 ADDITIONAL CONSULTATIONS AND POST-MISSION DISCUSSIONS 16
2.5.1 BAMSI ALUMNI AND YOUTH-RELATED VIRTUAL CONSULTATION 16
2.5.2 POST-MISSION FOLLOW-UP MEETING AND REVIEW OF THE UPDATED PROJECT STRUCTURE 16

3. APPENDIX 1. INITIAL STAKEHOLDER MAPPING 16

4. APPENDIX 2 INTERVIEW GUIDES EXAMPLES 16

5. APPENDIX 3. ATTENDANCE LISTS EXAMPLES 16

LIST OF TABLES

TABLE 1. STAKEHOLDERS CONSULTED DURING THE PREPARATION STAGES OF THE CONCEPT NOTE 3
TABLE 2. ITINERARY OF THE CONCEPT NOTE ORIGINATION MISSION 6
TABLE 3. STAKEHOLDERS VISITED DURING THE MISSION 13
TABLE 4. STAKEHOLDERS VISITED DURING THE MISSION 15

LIST OF FIGURES

FIGURE 1. STAGES OF STAKEHOLDER CONSULTATION DURING THE CONCEPT NOTE FORMULATION PROCESS. 3
FIGURE 2. SCREENSHOT OF THE EXPANDED KICK-OFF MEETING WITH CORE INSTITUTIONAL PARTNERS. 4
FIGURE 3. CONSULTATION WITH NATIONAL STAKEHOLDERS IN NEW PROVIDENCE 8
FIGURE 6. THE BOAT RAMPS AT MORGAN'S BLUFF 9
FIGURE 5. THE HARBOR AT MORGAN'S BLUFF 9
FIGURE 9. DAVEY CREEK BRIDGE 10
FIGURE 10. SHORELINE MATERIAL ACCUMULATION OBSERVED IN LOWE SOUND 10
FIGURE 11. THE NORTH ANDROS PACKING HOUSE OPERATED BY BAIC 11
FIGURE 12. FACILITIES AT BAMSI - MELON FARM AT BAMSI 11
FIGURE 13. CONSULTATION WITH LOCAL GOVERNMENT AND TECHNICAL INSTITUTIONS, NORTH ANDROS 12
FIGURE 14. CONSULTATION WITH FARMERS AND FISHERS OF NORTH ANDROS 13
FIGURE 15. FARM TOUR WITH ANDROS FARMERS 14
FIGURE 16. INFORMAL SITE VISIT AND DISCUSSIONS WITH FISHERS IN RED BAYS (LEFT), AND LOWE SOUND (RIGHT) 14
FIGURE 17. INFORMAL DISCUSSION WITH WOMEN FARMERS, NORTH ANDROS 15
FIGURE 18. FARM TOUR WITH NORTH ANDROS FARMERS 16

1. INTRODUCTION

CAF, Development Bank of Latin America and the Caribbean, in coordination with the Government of The Bahamas through the Office of the Prime Minister's Climate Change and Environmental Advisory Unit (OPMCCU-CCEAU), and with support from the Climate Finance Access Network (CFAN), engaged Viridia Projects to support the development of the proposed national project **"Enhancing Local Adaptive Capacity of Andros Island for Climate-Resilient and Sustainable Food Systems" — Resilient Food Island Project – Andros Island**, for submission to the Adaptation Fund.

The project is embedded in **The Bahamas' Race for Resilience (R4R) Programme**, a national adaptation program led by OPMCCU-CCEAU that seeks to strengthen the resilience of the Family Islands through climate-resilient grey and nature-based infrastructure, improved sub-national planning systems, and localized and national climate-finance mechanisms. The **Resilient Food Island Project** contributes specifically to the R4R package focused on food and livelihood infrastructure. Its initial design was informed by previous national and sectoral planning processes and technical studies, including the **Andros Island Sustainable Development Master Plan**, climate-risk and vulnerability assessments, national food-systems planning documents, and studies undertaken under the **Integrated Coastal Zone Management (ICZM) Programme**.

During the **Concept Note formulation stage**, stakeholder engagement was undertaken through **five main instances between April and June 2026**: (i) kick-off meetings and initial engagement with key national stakeholders; (ii) regular coordination meetings with OPMCCU-CCEAU, CFAN and CAF; (iii) initial virtual bilateral consultations with key institutional stakeholders; (iv) an originating mission with site visits and stakeholder consultations; and (v) additional consultations and post-mission validation discussions. Together, these engagements generated technical, institutional and community-level inputs to support refinement of the Concept Note and ensure that stakeholder perspectives were reflected in the development of the proposed project.

The objective of this report is to describe the **stakeholder engagement** and consultation process undertaken. Figure 1 presents the different stages of the consultation process, while Section 2 provides a more detailed description of each stage.

FIGURE 1. STAGES OF STAKEHOLDER CONSULTATION DURING THE CONCEPT NOTE FORMULATION PROCESS.



Table 1 lists all stakeholders consulted throughout the stages described above. Sex-disaggregated participation data are reported for each consultation activity in Section 2.

In total, 231 stakeholder engagement instances were recorded during the Concept Note stage, including 122 involving women (53%). These included 15 engagement instances involving external institutional stakeholders prior to the mission, 212 engagement instances recorded during the originating mission, and 4 engagement instances recorded through the BAMSI alumni and youth-related virtual consultation. As some stakeholders participated in more than one activity, these figures refer to recorded participation across consultation activities and should not be interpreted as the number of unique individuals consulted.

At each stage, the consulting team worked closely with CAF, OPMCCU-CCEAU and CFAN to identify relevant stakeholders and ensure broad representation of actors involved in the project, including governmental institutions, technical agencies, local authorities, producers, artisanal fishers, women, youth-related stakeholders, community representatives and other food-system actors. Appendix. 1 presents the initial stakeholder mapping developed at the beginning of the formulation process.

TABLE 1. STAKEHOLDERS CONSULTED DURING THE PREPARATION STAGES OF THE CONCEPT NOTE

Office of the Prime Minister	Climate Change and Environmental Advisory Unit (OPMCCU-CCEAU) Sustainable Development Goals (SDG) Unit
Ministry of Works & Family Island Affairs	Public Works Department Integrated Coastal Zone Management (ICZM) Programme The Office of The Administrator, North Andros
Ministry of Agriculture and Marine Resources	Department of Agriculture; Department of Marine Resources
Ministry of Social Services, Information and Broadcasting	Department of Gender and Family Affairs Community Affairs Division
Agricultural development and commercialization institution	Bahamas Agricultural and Industrial Corporation (BAIC)
Agricultural and marine-science institution	Bahamas Agriculture and Marine Science Institute (BAMSI)
Youth-related stakeholders	**BAMSI alumni** and sector-linked stakeholders consulted during the virtual youth-related session

Representatives of the local population	**North Andros District Council:** Chief Councilor, Deputy Chief Councilor, and Township Chairpersons
	Agricultural producers and producer organizations: Farmers, smallholder producers and agricultural associations consulted during the Andros field mission.
	Fisheries stakeholders: Artisanal fishers, fishing-community representatives and fisheries-related actors consulted during the Andros field mission.
	Women farmers and smallholder producers: participants in the targeted consultation with women producers and other women engaged during the Andros field mission.
	Wider community representatives with an interest in the project.

Through engagement with these stakeholders, it was possible to validate key climate-related threats and impacts affecting agriculture, fisheries, infrastructure, livelihoods and food systems in Andros, including **flooding, storm surge, saltwater intrusion, coastal erosion, rainfall variability, drought, heat stress, forest fires, power outages, and changing marine and weather conditions**. The consultations also helped identify **structural constraints that amplify climate vulnerability**, including limited cold-chain, processing and storage capacity; unreliable inter-island transportation; infrastructure gaps; fragmented data collection; institutional-coordination challenges; limited access to finance and technical assistance; and barriers affecting the participation of women and young people.

These findings directly informed the refinement of the proposed project measures. In particular, the consultation process supported the inclusion of water-management measures for productive activities and climate-smart technologies; the strengthening of cold-chain and climate-resilient processing infrastructure; greater attention to wildfire-related risks affecting agricultural production and assets; the revision of producer-support mechanisms based on lessons learned from previous programs; the assessment of resilient infrastructure for artisanal fishers; and a more integrated approach to flood-risk management in Lowe Sound. The consultations also reinforced the need for improved information sharing, gender-responsive engagement, local-government participation, and implementation arrangements that respond to the practical realities of communities in Andros.

During the Fully Developed Proposal stage, consultations will be expanded and deepened to validate the final technical design, budget and implementation arrangements. This will include further engagement with stakeholders across Andros and other relevant Family Islands; detailed assessment of priority infrastructure and ecosystem-based measures; confirmation of beneficiaries; further analysis of environmental and social risks; preparation of the Environmental and Social Management Plan and Gender Action Plan; refinement of stakeholder-engagement arrangements and the grievance mechanism; clarification of operation and maintenance responsibilities; and validation of the proposed governance structure and executing arrangements.

2. DESCRIPTION OF THE CONSULTATION PROCESS

The following sections describe the different consultations carried out by the consulting team and the main results of each of them.

2.1 KICK-OFF MEETINGS WITH KEY NATIONAL STAKEHOLDERS

Two initial meetings were held to formally launch the Concept Note formulation process. The first meeting brought together CAF, OPMCCU-CCEAU, CFAN and Viridia Projects to review the project context, methodological approach, timeline and coordination arrangements. A second expanded meeting was subsequently held with key institutional partners and technical agencies to present the formulation process and gather initial input.

2.1.1 KICK-OFF MEETING WITH CAF, OPMCCU-CCEAU, CFAN, AND VIRIDIA PROJECTS

On **15 April 2026**, **CAF, OPMCCU-CCEAU, CFAN and Viridia Projects** held a kick- off meeting to formally launch the Concept Note development process for the Resilient Food Island Project – Andros Island. The meeting reviewed the formulation timeline, coordination arrangements and stakeholder engagement approach.

2.1.2 EXPANDED KICK-OFF MEETING WITH CORE INSTITUTIONAL PARTNERS

On **23 April 2026**, an expanded kick-off meeting was held with 4 institutional stakeholders, of whom two were women (50%): the Department of Agriculture, BAMSI, BAIC and the ICZM Programme. The session was supported by OPMCCU-CCEAU, CFAN, CAF and Viridia Projects.

Participants reviewed the formulation process and discussed water-related and coastal risks, production and post-harvest losses, cold-chain constraints, lessons learned from the Associated Farmers Programme (AFP), the proposed Shared Processing and Market Facility (SPMF), and coastal-resilience measures in Lowe Sound. The discussion identified information gaps and priority issues requiring further analysis. Follow-up bilateral consultations were subsequently scheduled with relevant technical institutions and local authorities.

FIGURE 2. SCREENSHOT OF THE EXPANDED KICK-OFF MEETING WITH CORE INSTITUTIONAL PARTNERS.



2.2 REGULAR COORDINATION MEETINGS WITH OPMCCU-CCEAU, CAF, CFAN AND VIRIDIA PROJECTS

Throughout the Concept Note formulation process, regular coordination meetings were held with CAF, OPMCCU-CCEAU, CFAN and the Viridia Projects consulting team. These meetings supported joint planning, technical exchange and coordination throughout the preparation of the proposed project.

The discussions addressed stakeholder mapping, bilateral consultations, mission planning, engagement with local authorities, logistics, emerging technical inputs and the refinement of proposed project components. Additional meetings were held as needed to examine specific issues in greater detail and identify matters requiring further analysis during the Fully Developed Proposal stage.

2.3 INITIAL BILATERAL MEETINGS WITH KEY STAKEHOLDERS

During May 2026, initial bilateral meetings were held virtually with key stakeholders identified during the stakeholder-mapping process. These meetings sought to deepen the formulation team's understanding of the priority sectors, climate risks, vulnerabilities, institutional context and potential adaptation measures relevant to the Resilient Food Island Project – Andros Island.

Tailored interview guides were prepared according to the mandate and technical expertise of each institution. While the specific questions varied across meetings, the consultations generally addressed the following topics:

- Climate hazards and observed impacts affecting agriculture, fisheries, infrastructure, ecosystems and local food systems;
- Vulnerabilities affecting communities, productive activities and livelihoods;
- Past, ongoing and planned projects and programs;
- Existing studies, information gaps and monitoring needs;
- Lessons learned from previous initiatives;
- Potential adaptation measures and technical-feasibility considerations;
- Institutional mandates, operational capacity and opportunities for inter-institutional coordination;
- Stakeholder-engagement approaches and communication channels;
- Access to infrastructure, finance, training and technical assistance;
- Gender, youth and social-inclusion considerations; and
- Issues requiring further analysis during the Fully Developed Proposal stage.

Examples of the interview guides used are presented in Appendix. 2. The participation figures reported below refer exclusively to representatives of the institutions consulted and exclude members of the formulation, coordination and facilitation teams.

2.3.1 MEETING WITH BAMSI

Date: 4 May 2026
Participants consulted: 1 BAMSI representative (100% women).
Main points discussed: The discussion addressed water availability, increasing pressure on freshwater resources and saltwater intrusion associated with extreme weather events. It also covered recurrent forest fires, hurricane-related crop losses and post-harvest constraints. BAMSI shared its experience with climate-smart technologies, including hydroponics, aquaponics and other alternative production systems, as well as its perspective on data needs, applied research, demonstrations and training. Lessons learned from the previous Associated Farmers Programme (AFP) were also discussed, particularly logistical challenges, cold-chain limitations and technical support needs.

2.3.2 MEETING WITH DEPARTMENT OF MARINE RESOURCES

Date: 5 May 2026
Participants consulted: 1 DMR representative (0% women).
Main points discussed: The discussion focused on climate-related pressures affecting fisheries in Andros, including severe storms and hurricanes that can damage fishing equipment, vessels, landing sites and coastal infrastructure. It also addressed power outages, cold-chain disruptions and food-safety considerations that increase the risk of product losses. The need to assess resilient processing and storage infrastructure, as well as the condition of docks and ramps used by artisanal fishers, was highlighted. The

discussion further emphasized the importance of community ownership, youth engagement and the use of existing local structures, including local government and cooperatives, to support long-term sustainability. These inputs informed the further assessment of fisheries-related infrastructure, livelihood-support measures and governance arrangements.

2.3.3 MEETING WITH DEPARTMENT OF GENDER AND FAMILY AFFAIRS

Date: 5 May 2026
Participants consulted: 4 institutional representatives (100% women).
Main points discussed: The discussion covered the national gender-policy context, relevant legislation and institutional coordination mechanisms. It emphasized the need to ensure equitable access to opportunities, training, infrastructure and livelihood-support measures for women and men, while avoiding assumptions that agricultural and fisheries-related activities should primarily benefit men. Existing networks of women active in agriculture and nature-based livelihoods were identified as important stakeholders to engage during the consultation process. Recommendations were also made to ensure accessible consultation formats, including evening sessions, a combination of in-person and virtual engagement, and targeted women-only discussions when appropriate. These inputs informed the gender-responsive consultation approach adopted during the Concept Note stage and will support the more detailed gender assessment to be undertaken during the Fully Developed Proposal stage.

2.3.4 MEETING WITH THE MINISTRY OF WORKS & FAMILY ISLAND AFFAIRS AND THE ICZM PROGRAMME

Date:7 May 2026
Participants consulted: 4 institutional representatives, of whom 1 was a woman (25%).
Main points discussed: The discussion addressed infrastructure, coastal-management and climate-resilience considerations relevant to the proposed interventions in Lowe Sound. It covered existing technical studies, environmental clearances, maintenance arrangements and previous community-engagement activities undertaken under the ICZM Programme. The distinction between the Davey Creek bridge project, which is already being addressed through an existing Ministry of Works initiative, and any broader intervention involving the Davey Creek channel was clarified. Participants emphasized the need for additional baseline studies, hydraulic modelling and environmental assessment before confirming the final scope of any broader channel intervention, including the assessment of potential impacts on mangroves. The discussion also considered operation and maintenance arrangements, the need to align infrastructure-related measures with existing technical studies and resilience priorities for Andros, and the proposed location of the SPMF. These inputs informed further assessment of the proposed interventions in Lowe Sound and the infrastructure-related measures included in the project.

2.3.5 MEETING WITH THE ISLAND ADMINISTRATOR FOR NORTH ANDROS

Date: 8 May 2026
Participants consulted: 1 representative of the North Andros Island Administration, a woman (100%).
Main points discussed: The discussion addressed the role of local government in supporting the consultation process and coordinating the proposed mission to Andros. Communities particularly exposed to climate-related disruptions were identified, including Lowe Sound, Red Bays, Nicholls Town and Mastic Point. The discussion also covered coastal erosion, flooding, saltwater intrusion and the impacts of past hurricanes on local communities and livelihoods. The importance of involving councils and township representatives to build trust and facilitate community participation was emphasized. Practical arrangements for the mission were also discussed, including site visits, venues, meeting times, outreach channels and locally appropriate communication methods, as well as the need for flexible engagement approaches to reach farmers, artisanal fishers and other stakeholders who may not be able to attend formal meetings.

2.4 ANDROS MISSION WITH SITE VISITS

The mission aimed to engage directly with stakeholders and undertake site assessments to support the formulation of the concept note. The consultations and field visits were designed to gather information on local livelihoods, climate-related challenges, infrastructure needs, and investment priorities; validate preliminary findings and proposed interventions; identify implementation considerations; and provide the formulation team with a first-hand understanding of the environmental, social, economic, and institutional context of Andros.

The mission took place from 26–29 May 2026 and included activities in both New Providence and North Andros. Stakeholder engagements included consultations with government agencies, local government representatives, farmers, fishers, women farmers, educational institutions, and community stakeholders, as well as visits to existing facilities and proposed project sites. A total of 212 stakeholder engagements were recorded during the mission, (52% women).

The findings from these consultations and site visits informed the refinement of the proposed interventions, infrastructure considerations, and implementation approach. Attendance Lists are presented in Appendix. 3.

TABLE 2. ITINERARY OF THE CONCEPT NOTE ORIGINATION MISSION

	Tue. 26 May	Wed. 27 May	Thur. 28 May	Fri 29 May

Morning	10:00 – 12:00 Opening National Stakeholder Session New Providence	**08:30 – 10:00** **Site visit / meeting** – Huntley Christie High School Agriculture Department **10:00 – 1:00** **Government-coordinated site visits /tour –** SPMF Proposed Site, ICZM Project Site, BAIC Processing Site, BAMSI Farm and Facilities	9:00 – 12:00 Informal site visits and discussions with farmers and fishers	9:00 – 12:00 Continuation of informal site visits and discussions with farmers and fishers
Afternoon	3:00 – 4:30 ✈ Airport transit to Central Andros	2:00 – 4:00 Meeting with local government and technical institutions	2:00 – 4:00 Continuation of informal site visits and discussions with farmers and fishers	1:00 – 2:00 Transit from Central Andros to North Andros 2:00 – 4:00 ✈ Airport transit to New Providence
Evening	5:00 – 6:00 transit from Central Andros to North Andros	7:00 Multi-Stakeholder Session for Andros-based stakeholders	6:00 – 8:00 Continuation of informal site visits and discussions with farmers and fishers	

The activities carried out during the mission and site visits (May 26 to 29) are described below.

2.4.1 OPENING NATIONAL STAKEHOLDER SESSION

On 26 May, a national stakeholder session held in New Providence was hosted by OPMCCU-CCEAU, CFAN, CAF, and Viridia Projects. Organizations representing government agencies, technical institutions, academia, producer organizations, civil society organizations, development partners, and the private sector came together for a validation and scoping to support community engagement on Andros. 23 stakeholders (61% women) provided a broad range of technical, institutional, and sectoral perspectives relevant to food system resilience on Andros.

Participants were grouped into four sector-based discussion groups for facilitated discussions covering: stakeholder engagement infrastructure; agriculture, fisheries and food systems; and climate change adaptation and environmental, and social and gender considerations. The discussions were designed to identify key challenges, priorities, opportunities, and considerations relevant to project design and implementation.

Flooding, drought, saltwater intrusion, storm surges, hurricanes, and increasing pressure on freshwater resources were identified as significant challenges affecting food production systems and livelihoods on Andros. Discussions highlighted limitations in water management, post-harvest handling, processing capacity, transportation, logistics, and market systems as barriers to strengthening food security and climate resilience.

Participants offered their support of the proposed concept note and emphasized the importance of investments that strengthen climate-smart agriculture, water security, food processing, value addition, cold chain infrastructure, and market linkages, while also supporting innovation, research, technical capacity development, and inclusive participation.

Examples of the interview guides used are presented in Appendix. 2. The consultation helped to validate the project's initial diagnostic assessment and informed the design of subsequent stakeholder engagements undertaken during the mission.

FIGURE 3. CONSULTATION WITH NATIONAL STAKEHOLDERS IN NEW PROVIDENCE



2.4.2 SITE VISIT/ MEETING WITH HUNTLEY CHRISTIE HIGH SCHOOL AGRICULTURE DEPARTMENT

On 27 May, The Viridia Projects team met with the Principal and the Head of the Agriculture Department at Huntley Christie High School (2 persons, 50% women) to better understand how young people are currently being engaged in agriculture and to explore opportunities for strengthening youth participation in the sector.

The stakeholders provided an overview of the school's agriculture program, which includes crop production, livestock rearing, hydroponics, and practical hands-on learning opportunities for students. Discussions highlighted the school's efforts to expose students to modern agricultural practices while promoting agriculture as a viable career. The program was described as an important mechanism for introducing students to food production at an early age.

The Head of Department noted that students actively participate in the Agriculture and Marine Cadet Programme and highlighted ongoing efforts to strengthen pathways into agricultural careers and higher education. As part of this effort, the department is collaborating with BAMSI to facilitate the enrollment of at least five cadets during the next academic year.

The stakeholders identified opportunities to further strengthen agricultural education through improved facilities, equipment, technology, soil and water testing services, and enhanced partnerships with national agricultural institutions. Discussions also emphasized the importance of creating stronger linkages between secondary education, technical training, and employment opportunities within the agriculture sector.

The school representatives expressed strong support for the project and its potential to strengthen youth engagement, workforce development, innovation, and long-term capacity within the agricultural sector.



2.4.3 GOVERNMENT COORDINATED SITE VISITS/TOUR

On 27 May, site visits were led by the Office of the Administrator for North Andros, with representations from OPMCCU-CCEAU, CFAN, CAF, and Viridia Projects. Throughout the site visits/tour 11 stakeholders were engaged (64% women).

Morgan's Bluff – Proposed SPMF site

The mission team visited the proposed location for the SPMF at Morgan's Bluff to assess site conditions, existing infrastructure, accessibility, and considerations relevant to future project investments.

The main observations and discussion points were:

- Available land and existing structures were observed on the site.
- Existing infrastructure would require repairs, upgrades, and modernization.
- Existing port infrastructure includes both shallow-water and deep-water docking facilities.
- Accessibility and proximity to marine transportation infrastructure were considered in assessing the site's suitability.
- Exposure to coastal hazards and climate-related impacts were identified as factors for consideration in future infrastructure planning.

FIGURE 5. THE HARBOR AT MORGAN'S BLUFF



FIGURE 4. THE BOAT RAMPS AT MORGAN'S BLUFF



Davey Creek Bridge

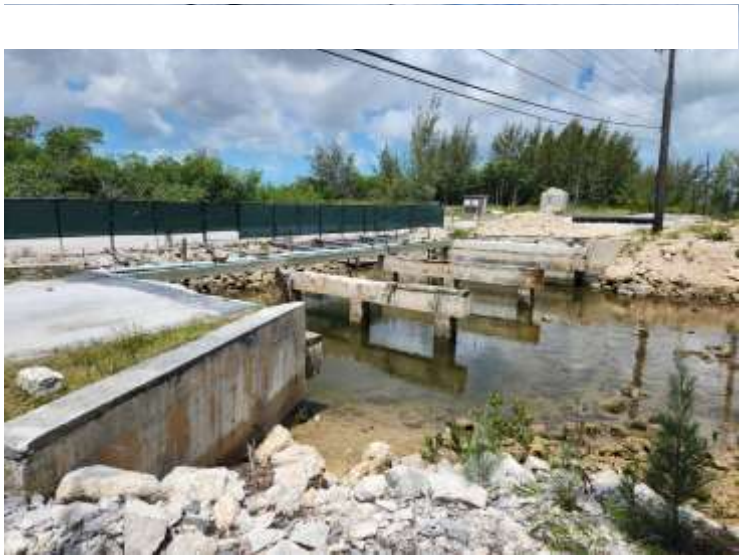
The mission team visited the Davey Creek crossing to observe existing conditions and better understand flooding and drainage challenges affecting the Lowe Sound community.

The main observations and discussion points were:

- The bridge crossing has experienced significant deterioration, with only portions of the original concrete substructure remaining.
- Temporary access works and culvert infrastructure appear to restrict water flow through the creek.
- Sedimentation was observed within the creek and surrounding wetland system.
- Existing culverts may be undersized relative to the width of the natural channel.
- Lowe Sound's low-lying location and dependence on a single access route increase vulnerability to flooding and extreme weather events.
- Reconstruction of the bridge may provide opportunities to improve hydraulic connectivity and drainage capacity.
- Additional hydraulic and hydrodynamic assessments may be required to identify sustainable flood mitigation measures.

FIGURE 6. DAVEY CREEK BRIDGE





ICZM Project Mangrove Islet Site

The mission team visited the location for proposed ICZM Project mangrove islets to observe site conditions and assess the suitability of the proposed intervention.

The main observations and discussion points were:

- Lowe Sound remains vulnerable to storm surge impacts due to its low-lying coastal setting.
- Existing community-led initiatives utilizing conch shells and mangroves for shoreline protection were observed.
- The proposed intention of the intervention includes a reduction of wave energy reaching the shoreline and support for coastal resilience.
- The suitability of the proposed intervention for the location.
- The possibility that there may be a need for further assessment to better understand potential impacts on coastal processes, sediment movement, and the surrounding marine environment.

FIGURE 7. SHORELINE MATERIAL ACCUMULATION OBSERVED IN LOWE SOUND



BAIC- Optional Proposed SPMF Site

The mission team visited the BAIC packing house facility to assess existing operations, infrastructure needs, and opportunities for future investment.

The main observations and discussion points were:

- The facility occupies a centrally located site accessible to agricultural producers throughout North Andros.
- Existing infrastructure provides a foundation for continued operation but requires repairs and upgrades.
- Limited storage and processing capacity constrain opportunities for value addition and market expansion.
- Existing systems for handling, storage, and packaging could benefit from modernization and expansion.
- Opportunities were identified to strengthen post-harvest management, processing capacity, and climate-smart infrastructure improvements.

FIGURE 8. THE NORTH ANDROS PACKING HOUSE OPERATED BY BAIC





BAMSI

The mission team visited BAMSI to tour agricultural and livestock facilities and assess infrastructure relevant to proposed project investments.

The main observations and discussion points were:

- Existing crop production and livestock facilities were observed.
- The piggery was assessed in relation to the proposed abattoir component.
- Existing infrastructure and available land resources were reviewed.
- Opportunities and requirements for future infrastructure improvements were discussed.
- Potential linkages between BAMSI and other proposed project investments were considered.

FIGURE 9. FACILITIES AT BAMSI - MELON FARM AT BAMSI





2.4.4 MEETING WITH LOCAL GOVERNMENT AND TECHNICAL INSTITUTIONS

On 27 May, a meeting hosted jointly by OPMCCU-CCEAU, CFAN, CAF, and Viridia Projects brought together 14 participants (57% women) representing members of the North Andros District Council and a local representative from the Ministry of Works and Family Island Affairs. Participants provided perspectives on community priorities, climate-related challenges, infrastructure needs, and opportunities for strengthening food system resilience across North Andros.

The session served as an opportunity to introduce the proposed concept to local community leaders, obtain feedback on the preliminary concept, and validate key issues and priorities ahead of the broader community consultations. Discussions also

provided an opportunity to build awareness of the proposed interventions and secure the support of local leaders who play an important role in community development and stakeholder engagement.

Participants identified climate change impacts, including longer summers, shorter winters, and increasing pressures on agricultural production systems, as important challenges affecting local livelihoods. Discussions also highlighted the need for improved access to equipment, supplies, markets, technical support, and training opportunities, as well as investments that are integrated and would strengthen agricultural production, fisheries development, food processing, storage, and cold chain infrastructure.

Stakeholders emphasized the importance of transparent market systems, improved payment mechanisms for producers, effective grading and utilization of agricultural products, and greater access to market information. Participants also highlighted the importance of technical and vocational training, equipment maintenance, food safety standards, and long-term sustainability measures to support the success of future investments.

Participants expressed support for the proposed project and indicated a willingness to support project implementation where community benefits are visible, and local concerns are addressed.

2.4.5 MULTISTAKEHOLDER SESSION FOR ANDROS-BASED STAKEHOLDERS

FIGURE 10. CONSULTATION WITH LOCAL GOVERNMENT AND TECHNICAL INSTITUTIONS, NORTH ANDROS



On 27 May, a multistakeholder session hosted jointly by OPMCCU-CCEAU, CFAN, CAF, and Viridia Projects provided an opportunity to introduce the proposed concept to farmers, fishers, and community stakeholders for their feedback on priorities, opportunities, and implementation considerations.

A total of 131 stakeholders (52% women) participated in the consultation. Participants represented a broad cross-section of the agricultural and fisheries sectors, including 85 farmers, 32 fishers, 5 stakeholders involved in both farming and fishing activities, and 9 other community stakeholders. Participation reflected a wide range of age groups and levels of experience within both sectors.

Stakeholders generally expressed support for the concept presented, and welcomed the focus on strengthening food security, climate resilience, agricultural production, and economic opportunities on Andros. Proposed interventions related to climate-smart agriculture, capacity building, institutional strengthening, and support for producers were well received. Stakeholders also expressed support for the proposed climate-smart upgrade and expansion of the BAIC packing house facility, including increased storage capacity, improvements to cold chain infrastructure, enhanced packaging and handling systems, and the introduction of food processing opportunities to support value addition and reduce post-harvest losses.

A significant portion of the discussion focused on the proposed location of the SPMF and associated fisheries infrastructure. Participants were presented with options that included locating facilities at Morgan's Bluff, at the existing BAIC site, or utilizing a combination of both locations. Stakeholders discussed the advantages associated with each option and generally focused on accessibility, operational efficiency, and long-term sustainability.

Participants noted that Morgan's Bluff could provide a suitable location for a stand-alone fisheries facility due to its proximity and accessibility to fishers, particularly those operating from Lowe Sound and Red Bays. However, stakeholders also recognized the advantages of locating both agricultural and fisheries facilities at the existing BAIC site, citing its central location, existing infrastructure, and potential to provide integrated services to producers and fishers. Discussions suggested broad acceptance of either approach, provided that the selected option remains accessible to users and delivers meaningful benefits to both sectors.

Stakeholders also discussed challenges affecting agricultural and fisheries livelihoods, including the impacts of climate variability, access to equipment, workforce constraints, and the need to strengthen opportunities for local production, processing, and value addition. Participants emphasized the importance of investments that improve the resilience and competitiveness of local food systems.

The consultation provided valuable insight into stakeholder priorities and implementation considerations and informed subsequent discussions.

FIGURE 11. CONSULTATION WITH FARMERS AND FISHERS OF NORTH ANDROS





2.4.6 INFORMAL SITE VISITS WITH FARMERS AND FISHERS

During 28 - 29 May, informal site visits and a meeting were undertaken by the Viridia Projects team.

Farmers and Fishers Site Farm and Community Visits

TABLE 3. STAKEHOLDERS VISITED DURING THE MISSION

Stakeholder	Sex	Livelihood	Community
Tina Newton-Butler	Female	Farmer	San Andros
Elridge Newton and Craig Newton (father and son team)	Male (x2)	Farmers	Queen's Highway
Rex Moss	Male	Fisher	Lowe Sound
Kevin Brown	Male	Fisher	Red Bays
Jim Knowles	Male	Fisher	Red Bays
Micheldo Rolle	Male	Fisher	Red Bays
Wyena Russell Colebrook	Female	Fisher	Red Bays

Observations

Farm Sites

- Active agricultural production was observed at both farm sites.
- A variety of crops were being cultivated under local farming conditions.
- Irrigation systems and drilled wells were being utilized to support agricultural production.
- Crop residues and agricultural waste materials were observed on the farms.
- The farms demonstrated ongoing efforts to maintain and expand agricultural production despite climatic and operational challenges.

Fishing Communities

- Site visits were conducted at docking facilities in Red Bays and the shore of Lowe Sound.
- Recently upgraded dock infrastructure was observed within the fishing communities.
- The need to incorporate climate-resilient and climate-proofing measures into existing and future infrastructure was identified.

Discussion Points

- Climate-related impacts on farming and fishing livelihoods, including changing weather patterns, flooding, drought conditions, and other environmental stressors.
- Existing adaptation measures being implemented by farmers and fishers to respond to changing climatic conditions.
- Access to financing, equipment, and productive assets needed to strengthen and expand agricultural and fisheries operations.
- Rising operational costs and other constraints affecting productivity, efficiency, and long-term economic sustainability.
- Support for investments that improve resilience, productivity, and livelihood opportunities within the agriculture and fisheries sectors.
- Feedback on the proposed SPMF and related infrastructure investments.

- Support among farmers for locating the agricultural component of the SPMF at the BAIC site due to its central location, accessibility, and existing infrastructure.
- Support among fishers in Red Bays for locating the fisheries component of the SPMF at the BAIC site, with participants indicating that a centralized facility would be more practical and cost-effective than transporting products to Morgan's Bluff.

FIGURE 12. FARM TOUR WITH ANDROS FARMERS





FIGURE 13. INFORMAL SITE VISIT AND DISCUSSIONS WITH FISHERS IN RED BAYS (LEFT), AND LOWE SOUND (RIGHT)







2.4.7 INFORMAL MEETING WITH WOMEN FARMERS

On 28 May an informal meeting was convened by the Viridia Projects team to provide a dedicated space for women farmers who had participated in the broader stakeholder consultation on the previous evening. The session was designed to better understand the role of women within the agricultural sector, identify any unique challenges they face, and gather their perspectives on opportunities to strengthen climate resilience, agricultural production, and livelihoods on Andros.

A total of 21 women participated in the discussion, representing a range of farming operations and communities across North Andros. The session provided an opportunity for participants to openly discuss their experiences within the sector and the challenges affecting their farms and livelihoods.

Participants highlighted the impacts of climate variability and changing weather patterns on agricultural production and discussed the measures they have adopted to adapt to these conditions. Women farmers emphasized that limited access to financing remains one of the most significant barriers to expanding and improving their operations and noted the importance of access to equipment, technology, and other productive assets.

Stakeholders also expressed interest in additional training and technical support to strengthen climate-resilient agricultural practices and improve productivity. Participants emphasized the importance of ensuring that training opportunities are accessible and flexible and highlighted the need for improved access to weather and climate information to support planning and decision-making.

The consultation also identified several gender-specific considerations. Participants noted that extreme heat can create additional challenges for women engaged in agricultural activities and emphasized the importance of ensuring that future interventions are responsive to the realities faced by women producers.

Discussions highlighted interest in strengthening collaboration among women involved in agriculture, including the potential establishment of a Women's Farmers Association to support networking, knowledge sharing, and collective advocacy within the

sector Participants collectively expressed strong support for the proposed project concept and viewed it as an important opportunity to strengthen the agricultural sector, improve livelihoods, and increase resilience within farming communities in Andros.

2.4.8 INFORMAL SITE VISITS WITH FARMERS

FIGURE 14. INFORMAL DISCUSSION WITH WOMEN FARMERS, NORTH ANDROS



TABLE 4. STAKEHOLDERS VISITED DURING THE MISSION

Stakeholder	Sex	Livelihood	Community
Carvell Sargent	Male	Farmer	Queen's Highway
Fred LeFleur	Male	Farmer	BARC

Observations

- Active crop and livestock production were observed across both farming operations.
- A diversified agricultural enterprise with a focus on agritourism and agricultural diversification was observed.
- A family-operated farming enterprise engaged in both crop production and livestock rearing was visited.
- Farm infrastructure supporting agricultural production and post-harvest activities was observed, including an onion drying facility.
- Evidence of ongoing efforts to diversify agricultural production and improve farm sustainability was observed.

Discussion Points

- Climate-related challenges affecting agricultural production, particularly prolonged periods of heat and drought.
- Access to financing, equipment, and productive assets needed to support farm expansion and long-term sustainability.
- High land preparation costs and limited access to heavy equipment as barriers to agricultural development.
- Opportunities to strengthen agricultural diversification, agritourism, and local market development.
- Support for investments in post-harvest handling, storage, processing, and value-added production.
- Support for the climate-smart upgrade and expansion of the BAIC facility, including enhanced storage, processing, and marketing opportunities.
- Support for locating the agricultural component of the SPMF at the BAIC site due to its central location, accessibility, and existing infrastructure.
- Support for a separate fisheries facility at Morgan's Bluff from the agritourism operator, who viewed the location as more practical and accessible for fishers.
- Opportunities for project investments to strengthen agricultural productivity, resilience, and the long-term sustainability of farming enterprises.

FIGURE 15. FARM TOUR WITH NORTH ANDROS FARMERS





2.5 ADDITIONAL CONSULTATIONS AND POST-MISSION DISCUSSIONS

Following the field mission, additional discussions were held to gather complementary inputs and review proposed adjustments to the project design.

2.5.1 BAMSI ALUMNI AND YOUTH-RELATED VIRTUAL CONSULTATION

Date: 1 June 2026
Participants consulted: 4 stakeholders, of whom 2 were women (50%)
Main points discussed:

- Barriers affecting youth participation in agriculture, fisheries and related food-system activities, including access to land, start-up finance, equipment, training and markets.
- The importance of presenting agriculture and fisheries as modern and economically viable career pathways.
- The role of practical learning, innovation and stronger market linkages in attracting and retaining young people.

These inputs informed the refinement of the project's youth-related, training and innovation activities, including the proposed BAMSI Innovation Hub and support measures aimed at reducing barriers to entry for young people.

2.5.2 POST-MISSION FOLLOW-UP MEETING AND REVIEW OF THE UPDATED PROJECT STRUCTURE

On 4 June 2026, a post-mission follow-up meeting was held with OPMCCU-CCEAU, CFAN and the Viridia Projects consulting team to review the main findings from the field mission and the BAMSI alumni consultation, discuss proposed adjustments to the project activities, and identify issues requiring further analysis during the completion of the Concept Note.

The discussion supported the refinement of the proposed project structure and identified next steps for further engagement with relevant institutions and for the assessment of pending implementation and governance arrangements.

3. Appendix 1. Initial Stakeholder Mapping

4. Appendix 2 Interview guides examples

- Bilateral interview guides;
- Mission consultation guides;

5. Appendix 3. Attendance lists examples

Appendix 1. Initial Stakeholder Mapping

#	Group	Category	Purpose in the project	Priority
1	**Farmers'/ associations and groups**	Primary agricultural producers	Supply base for SPMF	Critical
			Validate production volumes, consistency, and losses	
			Test willingness to use aggregation/processing systems	
2	**Fishermen**	Primary fisheries producers	Validate fisheries value chain	Critical
			Inform cold storage, handling, and aggregation needs	
			Assess integration into broader food system	
3	**BAIC**	Aggregation & Processing (Agriculture)	Benchmark for existing aggregation model	Very High
			Identify gaps, inefficiencies, and opportunities	
			Inform whether to upgrade, integrate, or redesign	
4	**Fish Houses**	Aggregation & Storage (Fisheries) / Market/ Buyers	Benchmark for fisheries aggregation systems	Very High
			Identify storage, handling, and market linkages	
			Identify gaps between supply and demand	
			Inform volume, quality, and consistency requirements	
5	**Mailboat Operators (New Providence based with scheduled arrivals into Andros)**	Logistics & Market Access	Validate movement of goods to Nassau and other Family Islands, including cold logistics	Very High
			Identify transport constraints and reliability	
			Confirm feasibility of scaling production	
6	**Large Hotels, Restaurants, and Food stores**	Market / Buyers	Validate demand for local products	High
			Identify gaps between supply and demand	
			Inform volume, quality, and consistency requirements	
7	**BAMSI**	Technical & Training Institution	Anchor for innovation hub	High
			Provide training and extension support	
			Enable adoption of climate-smart practices	
8	**Cooperatives/Chamber of Commerce**	Business Coordination & Representation	Facilitate aggregation and coordination	High
			Potential role in SPMF governance or operations	
9	**Small Producers**	Secondary Producers	Test system reach beyond North Andros	High
			Identify access and participation barriers	
10	**Island Administrators & Local Government Officials**	Governance & Local Coordination	Provide local legitimacy and coordination	High
			Inform land use, priorities, and risks	
11	**Department of Marine Resources**	Sector Regulator	Regulatory framework	

#	Group	Category	Purpose in the project	Priority
			Fisheries management and compliance	Moderately High
12	**Royal Bahamas Defense Force**	Maritime Security & Coastal Enforcement	Provide insight into marine oversight, enforcement, and risks affecting fisheries operations and coastal access	Moderately High
13	**Department of Agriculture**	Sector Regulator	Ensure alignment with agricultural policy, programs, and extension services supporting the sector	Moderately High
14	**Ministry of Work & Family Island Affairs**	Infrastructure & Public Works	Validate infrastructure feasibility	Moderately High
			Identify constraints	
	ICZM Project	Environmental Mgt. & Climate Resilience Initiative	Inform integration of coastal resilience and climate risk considerations into project design	Moderately High
15	**Women's Groups/ Special Interest Groups**	Social & Inclusion	Identify participation barriers	Moderate
			Ensure inclusive design	
16	**Communities across Andros (to include Bahamas National Trust)**	Beneficiaries / Local Stakeholders	Validate local needs and perceptions	Moderate
			Ensure social acceptance	
17	**Tertiary-level & High schools (agriculture dept.)**	Education & Workforce Pipeline	Develop future farmers	Moderate, strategic
			Identify skills gaps and training needs	

Development of an AF Concept Note and Funding Proposal
– R4R Program –
Resilient Food Island Project – Andros Island

Appendix 2. Interview guides examples

Bilateral meeting

Bahamas Agricultural and Marine Science Institute (BAMSI)

Date: 4 May 2026
Modality: online.

Project overview

The Government of The Bahamas, with CAF as Accredited Implementing Entity, is preparing an Adaptation Fund Concept Note aimed at strengthening climate-resilient food systems in Andros Island. The proposed project is structured around three inter-linked components:

1. Strengthening local adaptive capacity through climate-resilient infrastructure for food systems and ecosystem services, including agro-fishery and post-harvest infrastructure, climate-smart processing and market facilities, and integrated coastal zone management measures to reduce exposure to climate risk
2. Diversification and improvement of nature-based livelihoods, focusing on strengthening climate-resilient food production systems, post-harvest processing, and value chains, and promoting inclusive, financially viable livelihood opportunities through innovation, partnerships, and business-to-business linkages.
3. Strengthening local planning, knowledge systems, and monitoring, evaluation and learning (MEL) for adaptive food system governance, including technical capacity building, data and knowledge generation, and mechanisms to support learning, replication, and national dialogue.

This meeting is intended to build on the discussions held during the kick-off meeting with key partners, as well as on the desk review and preliminary technical analysis conducted by the consulting team. Its purpose is to further deepen understanding of climate risks, adaptation needs, and technically viable solutions, with a specific focus on BAMSI's experience and evidence base relevant to Andros.

Key questions / topics for discussion

Hydrogeology, water, and salinity

1. Hydrogeological studies and evidence
    - Is BAMSI aware of any existing hydrogeological studies or data for Andros (e.g. aquifer characteristics, freshwater lens, salinity, recharge)?

- Which institutions currently hold or manage this information?

2. Salinity and climate drivers
    - Based on available evidence, is saltwater intrusion mainly chronic, or primarily driven or worsened by extreme events (storm surge, hurricanes, drought)?
3. Spatial patterns of water stress
    - Are there specific areas in Andros where water stress or salinity issues are more severe, and what explains these patterns?
4. Data gaps for adaptation
    - What are the most critical data gaps today for planning climate adaptation in food systems?
    - What minimum additional data or monitoring would most strengthen adaptation decisions?

Impacts & adaptation options

5. Concrete climate-driven losses
    - Can BAMSI share **specific examples** where climate events (e.g. droughts, flooding, salinity) have resulted in **measurable losses**, and at which points of the value chain these tend to occur (production, post-harvest, processing, market access)?
6. Proven climate-resilient practices and systems
    - Which **climate-smart practices, crops, or production systems** tested by BAMSI have shown the greatest resilience under drought, flooding, or salinity in Andros-like conditions?
7. Readiness to scale
    - Which of these solutions are **ready for scaling** in Family Islands, and which remain **pilot-level or experimental**, and why?

Associated Farmers Program (AFP) & institutional learning

8. AFP model – bottlenecks
    - From BAMSI's technical perspective, what were the main practical bottlenecks of the Associated Farmers Program (AFP) model, particularly under climate stress?
9. Climate-resilient redesign of AFP
    - Which elements of the AFP model remain relevant today, and which would need to be fundamentally redesigned under increasing climate variability and water constraints?
10. BAMSI's contribution

- From BAMSI's perspective, what role would BAMSI be best placed to play in supporting a climate-resilient version of producer support (e.g. applied research, training, demonstrations, data and knowledge generation)?

Appendix 2 Interview guides examples

Proposed Agenda – Nassau Scoping Session (26 May)

Time: 10:00 – 12:00 (2 hours)

Time	Duration	Session	Lead(s)
10:00 – 10:15	15 min	1. **Welcome and Opening Remarks** • Opening and institutional framing	**Rochelle Newbold** – Director, Climate Change and Environmental Advisory Unit (OPMCCU) **Sebastián Rodríguez Claros** – Principal Executive, Climate Action and Positive Biodiversity Management, Corporate Strategic Programming Vice Presidency, Development Bank of Latin America and the Caribbean (CAF)
		2. **Positioning within R4R programme**	**Rowena Tolentino** –Climate Finance Advisor - Climate Finance Access Network (CFAN), embedded within the OPMCCU
10:15 – 10:30	15 min	3. **Project Overview and Initial Scope** • Approach to the formulation process • The climate rationale • Objectives and key components of the project • Mission objectives and program	**Laura Abram Alberdi** – Viridia Projects
10:35 – 11:40	60 min	**3. Guided Consultation: Climate Challenges, Priorities and System Constraints** Objective: Validate diagnosis, key climate risks, priority intervention areas, and system bottlenecks to inform project design.	**Moderation of 4 groups: Viridia Projects** • Claudine Green (stakeholders' engagement) • Alberto Pinto (infrastructure) • Jeri Kelly-Russell (fishing and farming)

Time	Duration	Session	Lead(s)
		Structured discussion rounds: • Key climate risks affecting food systems (agriculture, fisheries, infrastructure) • Main system constraints (post-harvest, transport, logistics, reliability) • Targeted inputs from selected actors on practical bottlenecks and resilience needs.	• Laura Abram Alberdi (adaptation to climate change, environmental, social, gender) 5 min – organization of groups 40 min – 4 conversations of 10 min each 15 min – presentation of main ideas
11:40 – 11:50	10 min	4. Next Steps and Process Going Forward • Next engagement steps	Sebastián Rodríguez Claros (CAF) Rowena Tolentino (OPMCCU / CFAN)
11:50 – 12:00	10 min	5. Closing Remarks • Final reflections • Wrap-up	OPMCCU (Rochelle Newbold)

Guided consultation – questions (think of 10 min conversation)

- Claudine Green (stakeholders' engagement)
  "In this round, I will focus only on stakeholder engagement: who needs to be involved, how to reach them, and who may be missed. Other colleagues will ask about infrastructure, production systems, and environmental or social risks".

GROUP 1: Agriculture, Producers, and Food Systems

- Which farming communities, producer groups, processors, or market actors should the project team engage directly during the Andros mission?
- What is the best approach for meaningfully engaging farmers and food system actors in Andros, particularly at the community level?
- Are there groups within the agriculture and food systems sector whose perspectives are often overlooked or underrepresented in consultation processes?
- What challenges could affect stakeholder participation or long-term engagement within this sector?

GROUP 2: Fisheries, Marine Livelihoods, and Market Access

- Which fishing communities, fishers' groups, processors, buyers, or marine stakeholders should be prioritized for direct engagement during the mission?
- What engagement approaches tend to work best when consulting with fishers and marine livelihood groups in Andros?
- Who is often missed in fisheries or marine value chain consultations, and what practical barriers could limit their participation?

GROUP 3: Government, Infrastructure, and Technical Agencies

- Which national agencies, local offices, or technical actors are essential to engage throughout the project development process?
- What is the best way to coordinate stakeholder engagement between national agencies, local government, and community stakeholders in Andros?
- Are there stakeholder groups or local actors that Government processes sometimes have difficulty reaching effectively?
- Based on previous projects or consultations, what engagement lessons should help inform this process?

GROUP 4: NGOs, Development Partners, Finance, and Supporting Services

- Which organizations, support services, or community actors do you believe should be more actively engaged throughout this process?
- What stakeholder groups may require more targeted outreach or follow-up engagement beyond large consultation meetings?
- What are the main challenges typically encountered when carrying out stakeholder engagement in the Family Islands?
- How can this process better support meaningful participation rather than simple attendance at meetings?

- Alberto Pinto (infrastructure)
  "In this round, I will focus only on infrastructure and physical resilience: what assets are critical, where they fail, why they fail, and what upgrades may be feasible"

GROUP 1: Agriculture, Producers, and Food Systems

- Could you identify the most critical infrastructure which has been affected over the years by climate hazards, and describe their importance for food security?
- What are the main infrastructure gaps limiting resilience in agriculture in terms of water management, transport and logistics infrastructure, utilities, etc.?
- Which infrastructure upgrades would be most feasible and useful for strengthening climate-resilient agriculture and food security in Andros?

GROUP 2: Fisheries, Marine Livelihoods, and Market Access

- What are the main weaknesses in marine food systems infrastructure? (landing sites, storage, cold chain, transport, processing, etc.)
- Are there any specific locations where marine infrastructure or landing sites are repeatedly damaged or become unusable during and after storms?
- Which infrastructure upgrades would most reduce disruption to fisheries, post-harvest handling and market access?

GROUP 3: Government, Infrastructure, and Technical Agencies

- Which infrastructure systems are most critical for food security and livelihoods in Andros — roads, drainage, water supply, power, docks, ports, storage, processing or communications?

- What are the main drivers of flooding and disruption in Andros? (intense rainfall, storm surges, low-lying topography, tidal backwater effects, storm surges, poor drainage, etc.)
- Could you point out in a map the most vulnerable sites, or where flood and disruption is most recurrent, and describe their importance?
- Which infrastructure investments would you consider to be top priority to reduce productive disruptions and increase resilience in the food sector in Andros?

GROUP 4: NGOs, Development Partners, Finance, and Supporting Services

- What types of climate adaptation or resilience interventions have been already implemented in Andros, and which ones have been proven to be most effective?
- Where are the remaining infrastructure gaps for food security, water security, cold chain, market access or coastal protection?
- Which grey, green or hybrid infrastructure measures would you consider to be most suitable, bankable and useful to implement in Andros to increase resilience in the food sector?

- Jeri Kelly-Russell (fishing and farming)
  "In this round, I will focus on how the food system works in practice: production, post-harvest losses, market access, livelihoods, adoption of technologies and support services".

GROUP 1: Agriculture, Producers, and Food Systems

- What are the main barriers preventing farmers from increasing reliable year-round production and supplying local markets consistently?
- What investments or support systems would most improve resilience and profitability for producers — such as irrigation, protected agriculture, storage, aggregation systems, feed access, extension services, or climate-smart technologies?
- If this project could solve only one major bottleneck in Andros' food system over the next five years, what should it prioritize and why?

GROUP 2: Fisheries, Marine Livelihoods, and Market Access

- How are changing weather patterns, warming waters, storms, or ecosystem degradation affecting fish stocks, fishing seasons, and fisher livelihoods in Andros?

- What are the biggest post-harvest and market-access challenges facing fishers today, particularly regarding ice production, cold storage, transport reliability, processing, and access to Nassau or tourism markets?
- Which support mechanisms would most strengthen resilient marine livelihoods —cooperatives, financing, training, vessel safety, market agreements, or value-added seafood processing?
- If this project could solve only one major bottleneck in Andros' food system over the next five years, what should it prioritize and why?

GROUP 3: Government, Infrastructure, and Technical Agencies

- What existing government programmes, policies, or planned investments could align with or support this project, and where are the major implementation gaps or coordination bottlenecks?
- Which proposed interventions are most likely to be adopted and used in practice by farmers, fishers, processors or buyers, and what would make adoption easier?
- If this project could solve only one major bottleneck in Andros' food system over the next five years, what should it prioritize and why?

GROUP 4: NGOs, Development Partners, Finance, and Supporting Services

- What are the biggest financing and capacity gaps preventing farmers, fishers, and small food enterprises from adopting climate-resilient practices and technologies?
- Which types of community-based or livelihood support interventions have proven most successful in strengthening resilience and food security in Family Islands or coastal communities?
- How can development partners and support organizations better coordinate technical assistance, financing, training, and market support to create long-term sustainable food systems in Andros?
- If this project could solve only one major bottleneck in Andros' food system over the next five years, what should it prioritize and why?

- Laura Abram Alberdi (adaptation to climate change, ESS and Gender)
  "In this round, I will focus on environmental and social risks, gender and inclusion: who benefits, who may be left out, what could go wrong, and what design criteria or safeguards are needed".

GROUP 1: Agriculture, Producers, and Food Systems

- For proposed activities such as training, improved storage, aggregation systems, or extension services, who would realistically be able to access and benefit from them, and who might be left out?
- Could these interventions create unintended social or environmental risks — for example, land-use changes, increased workload, exclusion of small producers, pressure on water resources or unequal access to benefits?
- What design measures would be needed to ensure women, youth, small-scale producers and vulnerable households can participate and benefit fairly?

GROUP 2: Fisheries, Marine Livelihoods, and Market Access

- Could investments such as improved landing sites, cold chain or increased market access lead to additional pressure on fish stocks or marine ecosystems?
- Could these interventions change access to fishing areas or resources in ways that create conflicts between different groups of fishers?
- What safety, working conditions, inclusion or benefit-sharing issues should the project consider in the fisheries sector?

GROUP 3: Government, Infrastructure, and Technical Agencies

- From an environmental and social perspective, which proposed measures raise the most uncertainty or potential risk — for example, coastal works, mangrove disturbance, dredging, land use, permitting or community impacts?
- For key design decisions such as location of facilities, selection of sites or inclusion of specific measures, what criteria should guide choices to ensure feasibility, resilience and do-no-harm?
- Where do coordination challenges usually arise between agencies on planning, permitting, implementation or monitoring, and how could these affect project delivery?

GROUP 4: NGOs, Development Partners, Finance, and Supporting Services

- From your experience, which environmental, social, gender or inclusion risks are often underestimated in similar projects in the Family Islands?
- Looking at past or ongoing interventions in Andros, which groups have not been adequately reached or supported by training, finance, infrastructure or livelihood programmes?
- What should this project avoid in order not to create unintended impacts, exclusion, dependency, conflict or unequal access to benefits?

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Appendix 2 Interview guides examples

Multi-Stakeholder Consultation Guide
(North Andros, evening of the 27 May 2026)

1. Purpose of the Consultation

The consultation aims to:

- Present the proposed Climate-Resilient Food Systems Project and proposed interventions.
- Gather feedback from fisherfolk, farmers, community members, government agencies, and other stakeholders;
- Identify key climate risks affecting fisheries, agriculture, food security, and coastal livelihoods;
- Understand local priorities, adaptation needs, and barriers;
- Validate proposed infrastructure, ecosystem-based adaptation, and livelihood interventions;
- Identify environmental and social considerations relevant to project implementation;
- Strengthen participatory and evidence-based planning for resilient food systems.

2. Suggested Participants

The consultation should seek balanced participation from:

- Artisanal fisherfolk
- Fish processors and vendors
- Smallholder farmers and producer groups
- Women's organizations
- Youth representatives
- Community leaders
- Agricultural and fisheries officers
- Environmental and disaster management agencies
- NGOs and civil society organizations
- Local government representatives
- Vulnerable or underrepresented groups where possible

3. Suggested Consultation Format

Duration: Approximately 2 hours
Suggested Number of Participants: 30–40 participants
Recommended Methodology:

- The consultation should combine:
  - Project presentation
  - Plenary discussion
  - Small-group facilitated discussions
  - Prioritization and validation exercises

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

This format allows broad participation, stakeholder exchange, and collection of structured feedback within a limited timeframe.

4. Suggested Agenda

Time	Activity	Responsible party
15 min	Registration and introductions	Registrations: Claudine Introduction: Laura
15 min	Presentation of the proposed project and objectives	Laura
15 min	Open plenary discussion and clarification questions	Laura
45 min	Small-group discussions	Depending on the quantity of people: If 3 groups: Laura, Claudine and Jeri facilitate and register If fewer people: at least 2 groups (separate women to ensure women consultation and address their interests and perspectives)
20 min	Group presentations and validation	
5 min	Prioritization exercise	
5 min	Closing remarks and next steps	

5. Project Presentation Guidance

The presentation should briefly explain:

- Climate challenges affecting food systems in The Bahamas;
- Proposed project components and interventions;
- Climate-resilient infrastructure activities;
- Ecosystem-based adaptation approaches;
- Capacity development and innovation activities;
- Expected benefits for fisherfolk, farmers, and communities;
- Importance of stakeholder participation in project design.

The presentation should use simple language, visual materials where possible, and avoid technical jargon.

6. Consultation Methodology and Facilitated Group Discussions

Group and Objective	Suggested Guiding Questions
Group 1 – Fisheries and Coastal Livelihoods Objective: Understand climate impacts,	Fisheries and Livelihoods • What are the main fisheries activities in the area? • How have fish catches, fishing grounds, or fish species changed over time? • What are the main challenges affecting fisherfolk livelihoods? • Are climate hazards causing loss of income, productive assets, or food

infrastructure needs, ecosystem pressures, and market challenges affecting fisheries-based livelihoods and coastal food systems.	sources? • Are there seasonal periods when fishing activities become more difficult? Climate and Environmental Changes • How are storms, coastal erosion, flooding, or sea-level rise affecting fisheries activities? • Have marine ecosystems changed (reefs, mangroves, seagrass, nursery areas) and do these changes affect fisheries productivity? • Have invasive species, algae, or ecosystem degradation affected fisheries or coastal areas? Infrastructure and Market Access • What infrastructure challenges affect fisherfolk most (docks, landing sites, storage, processing, roads, market access)? • What infrastructure is most vulnerable during storms or flooding? • Are transport routes and access to markets disrupted during extreme weather events? • Are evacuation routes and emergency access reliable? Adaptation and Priority Needs • What actions are communities already taking to adapt? • What investments or support would most strengthen fisheries resilience? • Are there ecosystem areas that should be protected or restored? • What training or technical support is most needed? <u>Environmental and Social Considerations</u> • Are there sensitive coastal or fisheries nursery habitats near proposed interventions? • Are there safety concerns related to landing sites or evacuation access? • Are there groups who may face barriers accessing project benefits or infrastructure? • Will there be an influx of male workers into the project area (as opposed to only using local labor)? Will migrant workers be attracted to the project area.
Group 2 – Agriculture, Water, and Food Systems Objective: Understand climate impacts on agriculture, water resources, production systems, and food security.	Agriculture and Food Systems • How are climate hazards (e.g. flood, drought, heatwaves, etc.) affecting agriculture production, livelihood, food availability, access to and farmers livelihood, and/or household nutrition? • What agriculture/livestock resilient practices are currently being employed by farmers (e.g. water management, resilient crops, improved livestock practices, new technologies)? • What are the main barriers/challenges farmers face in adopting resilient agriculture or livestock practice (e.g. limited access to land, finance, inputs, access to services, trainings and/or information)? o What training, financing, or technical support would most benefit women, elders and youth? • What type of support or infrastructure (productive, processing) are most needed to make food system more resilient (irrigation, drainage, storage, roads, processing facilities)? • What other factors are affecting agricultural production and livelihoods beyond

	climate-related challenges (e.g. high costs of fertilizers, agrochemicals, machinery, fuel, or market access issues)? • What other productive activities could help diversify household income and strengthened food security? Environmental and Social Considerations • What potential benefits or concerns do you associate with the proposed project activities? o What recommendations should be considered to ensure inclusive and equitable project benefits (include women, youth, elders)? • How can women, youth, and other vulnerable groups be more integrated within the project activities (to increase agriculture/livestock resilience)? • Are there any land tenure, land or water management issue that could affect agriculture production or limit the adoption of adaptation measures? Others (water, infrastructure and services): • Are water availability or water quality affecting agriculture? Have pests, diseases, or invasive species increased? • Are post-harvest losses or storage problems related to climate events increasing? • Are climate hazards causing loss of crops, livestock, income, or food sources? • What productive activities help diversify household income and food security? Climate and Water • Have rainfall patterns, droughts, flooding, or saltwater intrusion changed? • Are there areas exposed to flooding, erosion, or drainage problems? • Which areas are most exposed to flooding or water shortages? • Are electricity, water, transportation, and communication services reliable during extreme weather events?
Group 3 – Gender, Community Resilience, and Livelihood Diversification Objective: Understand differentiated climate impacts, gender dimensions, social vulnerabilities, adaptive capacity, and opportunities for resilient and diversified livelihoods.	Climate Impacts and Livelihoods • What are the main climate threats affecting households and livelihoods? • How do storms, flooding, drought, or water shortages affect women, men, youth, and vulnerable groups differently? • Are climate hazards causing loss of income, food sources, productive assets, or livelihood opportunities? • Which groups are most vulnerable to climate impacts and why? Participation, Access, and Decision-Making • Are women and youth actively involved in fisheries, agriculture, or related businesses? • Who has access to and control over productive resources such as land, water, boats, fishing equipment, irrigation systems, storage facilities, transportation, and credit? • Are there barriers limiting women's or youth participation in livelihoods, training, or decision-making processes? • Why do some groups participate less in meetings, trainings, or preparedness activities? Access to Services and Climate Information

	• Are electricity, transportation, health services, communications, and emergency services accessible during climate events? • Who receives climate information, forecasts, or early warnings most frequently? • Is climate information accessible and useful for women, men, youth, and vulnerable groups? • How could climate information and preparedness support be improved? Household Responsibilities and Time Use • Who is mainly responsible for caregiving, food preparation, water collection, household tasks, and care for elderly or vulnerable persons? • How do storms or flooding affect household responsibilities and workloads? • Do climate impacts increase the time burden on women or reduce time available for education, productive activities, or wellbeing? • Are there access or mobility challenges for elderly persons or persons with disabilities during climate events? Water, Health, and Food Security • Who is mainly responsible for accessing or collecting water during droughts or flooding? • Are water quality or water availability affected during extreme weather events? • Are there health impacts associated with flooding, storms, heat, or poor water conditions? Livelihood Diversification and Project Priorities • What opportunities exist for livelihood diversification or value-added activities? • What training, financing, or technical support would most benefit women and youth? • What project activities would most strengthen resilience and economic opportunities? • What recommendations should be considered to ensure inclusive and equitable project benefits? **Gender-Based Violence, Safety, and Protection Risks[1]** • Do climate-related events or economic stress increase safety or protection risks for women, girls, youth, or other vulnerable groups within households or communities? • Are there negative coping mechanisms linked to climate impacts or loss of livelihoods, such as school dropout, child labor, early unions/marriages, transactional sex, migration, substance abuse, or family conflict? • Do women, girls, persons with disabilities, elderly persons, or other vulnerable groups face barriers in accessing safe shelters, relief services, health services, or community support during or after climate events? • Are community members aware of available protection, psychosocial, health, or referral services for survivors of violence, exploitation, abuse, or harassment?

[1] Sugerencia para abordar estas preguntas: a veces es mejor consultar estos temas con referentes institucionales (como la DFGA, por ej., si estuviera presente) o con mujeres referentas de organizaciones. De esta manera, intentamos evitar "riesgos de revictimización"

	What gaps exist in access to these services? • Are you aware of any local mechanism or channel (hotline) available to report sexual abuse, assault or harassment?

8. Group Reporting and Validation

Each group should summarize:

- Main climate risks identified;
- Key livelihood challenges;
- Priority investments and adaptation measures;
- Environmental and social concerns;
- Recommendations for project design.

Facilitators should document:

- key discussion points,
- direct quotes where relevant,
- and areas of agreement/disagreement.

10. Documentation and Outputs

The consultation should generate:

- Attendance list;
- Photos;
- Consultation notes;
- Summary of stakeholder priorities;
- Key safeguards observations;
- Recommendations for project refinement;
- Inputs for climate-resilient food systems planning and investment prioritization.

11. Facilitation Recommendations

Facilitators should:

- Ensure balanced participation of women and youth;
- Encourage quieter participants to contribute;
- Use non-technical language;
- Avoid dominating discussions;
- Capture practical examples and local knowledge;
- Ensure discussions remain solution-oriented and constructive.

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Industry Stakeholder Consultation

Date: 26-5-26 Location: OPM, Nassau Bah.

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	LaMonica Clinton	AGENDEVCO	lamonica@aasc.bahamas.com	Agriculture & Environmental	818-2058		✓		✓		
2	Pericles Mallis	Mallis etc Farm	Centurion117@hotmail.com	Farmer/Fisherman conservation	422-3720	✓				✓	
3	Joseph Terra JR	Ocean crest Alliance	jijr-oca@ocean crest	Conservation	357-1196	✓				✓	
4	Nicola Terra	Ocean crest Alliance	alliance.org	Conservation	357-1277		✓		✓		
5	Kashan Bastian		bashank@btvi.edu.bs	Education	817 9563		✓		✓		
6	Raeeria Hanna	BAMSI	rhanna@bamsi.bahamas.edu.bs	IT	4248081		—		—		
7	Vanessa Rahming	ORG Bahamas	vanessa@orgbahamas.com	NGO	827-0466		✓		✓		
8	Dwight Brown		dwbrownzie@gmail	Business	636-0405	✓			✓		
9	Martha Hanna Smith	BAHNKOP	marthahanna women@gmail.com	Business	826-7576		✓		✓		
10	Nambi Jean	IAB	nambh@gmail.com	Education	376-5919		✓		✓		
11	David Bronzwaig	IDOM	david.bronzwaig@idom.com	Consulting	+525532247232	✓		✓			
12	Percival Roberts		[illegible]@gmail.com	Fisheries	803 5453	✓				✓	

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
13	Ronnette Cillie	Dept. of Coops	Ronnettecillie@bahamas.gov	Agriculture Cooperative	4463239		✓		✓		
14	Ginny Mackenzie	Organic Systems		Compost	424-7262		✓			✓	
15	Shanté Hanna	Youth Ambassador SDG	shante-hanna@hotmail.com	DPM Secretary CC Unit	829-6728		✓	✓			
16	Ana Ortega	IDom	ana.ortega@IDom.com	Consultant			✓		✓		
17	Shacara Lightbourne	Island Foodlife	shacara.lightbourne@gmail.com	Agric	466-3885		✓		✓		
18	Adrian Larios	BCFA.	abredabahfish@gmail.com		427-2491	✓					
19	Lester Gittens	DMR	lestergittens@bahamas.gov	Fisheries		✓			✓		
21	Shaunae Keogh	OPM	shaunaekeogh@bahamas.gov	Gender	376-8412		✓		✓		
22	Glenn Lightbourne	D.L.C. Agendevco Bahamas UB	glennlightbourne@bahamas.gov	Local Coordinator	818-8149	✓				✓	
23	Erecia Hepburn-Forbes		erecia.hepburn@ub.edu.bs		3256125		✓		✓		
24	Sebastian Rodriguez	CAF-Development Bank of Latin America and the Caribbean	SRodriguez@caf.com	Multilateral Development Bank	+573105606516	✓			✓		
25											
26											
27											
28											
29											
30											

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Meeting at Huntley Christie High School

Date: 27th May 2026 **Location:** North Andros

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
1	Mr. Demetrius Wildgoose	Nicholl's Town, North Andros	Demetrius.wildgoose@moe.edu.bs	Educación	242-329-2322	X			X		D. Wildgoose
2	Miss. Kate Cumberbatch	Nicholl's Town, North Andros	Kate.cumberbatch@moe.edu.bs	Educación	242-329-2322		X		X		Kate Cumberbatch
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Site Visits.

Date: 26-May-2026 Location: _____

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
1	Kadra Show	Morgan's Bluff	Ladykadra@gmail.com	Port Department	812-6582		✓		✓		Kadra Show
2	Andrea Rolle	Mastic Point	andrikarolle24@gmail.com	Dept of Local Govt	471-3198		✓		✓		
3	Debra Mackey	BARC	debramackey04@gmail.com	BAIC	423-2749		✓		✓		
4	Veronica Sweeting	Mastic Point	Sweetingearleen@gmail.com	BAIC	471-2301		✓		✓		Sweeting
5	Carla Rumney	Mastic Point	carlamunnings@baic.gov.bs	BAIC	422-1615		✓		✓		
6	Cameron Lightbourne	BARC	clightbourne@bamsi.bahamas.edu	BAMSI	471-9613	✓			✓		
7	Lennie McDonald	BASI	LMcDonald@Bamsi.com	BAMSI	471-9407	✓				✓	
8	Anthony Johnson	BAMSI	anajohnson@bamsibahamas.com		820 5116	✓		✓			
9	Leon K Gibson	BAMSI (GM)	dgibson@bamsibahamas.com		457-1185	✓			✓		
10	Beverley Laramore	Local Govt	beverleylaramore@bahamasgov.bs		357-6060		✓		✓		
11	Lakitchra Colebrooke	BAMSI (HR)	lakitchracolebrooke@gmail.com	471-9309	471 5350		✓	✓			L. Colebrooke
12											

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Local. Officers

Date: 27-5-26 Location: Administrator's Office

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
1	Samuel Pratt	Conch Sound	@yahoo.com Captain_Stimpy		3572584	✓			✓		
2	Traves Mackey	Conch Sound	Traves Mackey @gmail.com		423-0655	✓			✓		
3	Kadra Storr	Morgan's Bluff	.com Lady Kadra@gmail		612-6482		✓		✓		Kadra Storr
4	Gabrielle Evans	Nicholl's Town	ms.gabrielle evans@gmail.		357-2091		✓		✓		
5	Andrea Smith	Nichols Town	drucilla05 at hotmail.com		357-2082		✓		✓		
6	Tammie Evans	Nicholls Town	Tammievans 2019@ gmail		471-8009		✓		✓		Tevans
7	Carnell Sargent	MASTIC POINT TOWN	carnell sargent @hotmail.com		5541829	✓			✓		
8	James Storr	Lowe Sound	Jamesstorr 302@		357-2219	✓			✓		
9	Brian Cleare	Lowe Sound	HOT MAIL b cleare 242			✓					
10	Alfie Stubbs	Lowe Sound	mase alfiestubbs @hotmail		471-7512	✓	✓		✓		
11	Rochelle McKinney	Lowe Sound	mckinneyrochelle7@gmail.com		471-3588	—	—		—		
12	Sandra Emmanuel	MINISTRY OF WORKS	SANDRA EMMANUEL 137 @ yAHoo.com	Min of Work	357-2108		—		—		

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
13	Tina Cooper	Nicholls Town	cooperstina2@gmail.com	Local Gov.	471-8012		✓		✓		Cooper
14	Kate Cumberbatch	Nicholls Town	kate.d.cumberbatch@gmail.com	Hunting Chaisphe High. Teacher/ School Board Rep	804-5988		✓		✓		
15											
16											
17											
18											
19											
21											
22											
23											
24											
25											
26											
27											
28											
29											

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Farmers & Fishermen Consultation

Date: 27th - 5 - 26 Location: Huntley Christie High School Cafe

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	ADRIAN COX	San Andros	adrianfirstnamecox@yahoo.com	Farm (Agri.)	421-0356	✓			✓		
2	Alfreda Mackey	BARC	freda2011@gmail.com	/Farming	8139644		✓		✓		
3	Wjena Russell	Red Bay		Fishing	471770		✓			✓	
4	~~S~~			~~AAiC~~	~~New Town~~						
5	Sean Spence	San Andros	SeanSpence242@gmail.com	fisherman	816-4481	✓		✓			
6	Glendina Spence	Sandy Mnds	dina4334@hotmail.com	Farming	8133706		✓			✓	
7	~~AAiC~~	~~Love Sound~~		~~New Town~~	329-4248						
8	Craig Newton	Howe Sound	—	329-4248	—	✓			✓		
9	Stellmon Murphy	Love Sound	Murphyboy340@yahoo.com	8312297	Farming/fishing	✓			✓		
10	Anthia Knowles	Nicholl's Town	anthia Knowles 27@gmail.com	Farming	464-3239		✓		✓		
11	Jade Wallace	Fire Road	jadewallace242@icloud.com	Fishing	242-831-0652		✓	✓			
12	Wallace Cargill	Wallace Cargill	—	Fishman	554-0476	✓				✓	

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
13	Leroy Brady	San Andros	—	Fisherman	8156255	✓			✓		
14	Andrew Walker	North Bight Mastic Point	@gmail.com	Fisherman	826-6019	✓		✓			
15	Natreo Rolle	North Mastic	Natreorolle@icloud.com	Fisherman	242/8188570	✓		✓			
16	Nadia Seymour	North Mystic	nadiaseymour3@gmail	Farmer	242 6362199		✓	✓			
17	Regina Rolle	Fire Road North Andros	reneearolle@ yahoo.com	Farmer	554-1436		✓		✓		
18	Angelica Marshall	San Andros	triplea244@gmail.com	Local Business Owner	471-0622		✓		✓		
19	Mary Storr	" "	Marystorr@gmail	Farmer	818-2220		✓		✓		
21	Shekeva Russell	Lowe Sound		Farmer	824-0231		✓		✓		
22	Alexandra Russell	Fire Road	unified2014@ hotmail	Farmer Woman	471-5435		✓		✓		
23	McGregg Russell	Fare Road	unified2014@ hotm	Farmer	471-7483		✓		✓		
24	Avery Sargent	Barc	aeondros	Farmer	821-2165	✓			✓		
25	Edison Mackey	B.A.R.C	Edison Mackey 42 gmail	Farmer	4254035	✓			✓		
26	Glennika McQueen	Nicolls Town	glennikamcqueen@live.com	Local Business	471-7047		✓	✓			
27	Mavis Sea Adventure	Red Bays	—	Fisher	829-8107	✓			✓		
28	Geraldean Taylor	Red Bays	—	Farmer	458-5764		✓	✓			
29	Sherwin Scott	Nicolls Town	~	Fisher	808-8515	✓				✓	
30	Lyndon Gaitor	Nicholls Town	gaitorboy600@ gmail.com	Fisherman	826-0704	✓		✓			

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
31	Joe Barr	Nicholls Town	—	Fisherman	813-1101	✓		✓			Joe Barr
32	JETHRO STORR	Nicolls Town		Fisherman	554-1482	✓				✓	
33	Zekrine Adderley	Lowe Sound	~~Zekrine Adderley~~	—	423-6446		✓			✓	Adderley
34	Shanton Sears	Mastic Point		Fisherman	471-5609	✓			✓		S. Sears
35	Rudolph Bowe	San South Andros	RVB56@live.com	Boat	3094768	✓				✓	R.B. Bowe
36	Wayde Turnquest	Mastic Point	wayde2016turnquest@gmail.com	Boat	8170963	✓	~~not~~	⊘	✓		W. Turnquest
37	Nicole LaFleur	Barc		Framing	471-1429		✓		✓		N. LaFleur
38	Erica Joseph Marshall	Queen's Highway	ericajoseph@live.com	farmer	699-6624		✓		✓		E. Joseph
39	Edwardo Marshall	QH	edwardomarshall@live	fisherman	5041106	✓			✓		
40	Sheila Rolle	BARC		farmer	4713385		✓			71 ✓	
41	Olgan Moss	Lowe Sound	Tmoss957@gmail.com	Fishman	451-5065	✓		✓			~~Olgan~~
42	Tarino White	Ncl. Town	tarinocohitae7@gmail.com	Farmer	824-9345	✓			✓		Tarino White
43	Alvito Miller	Coral Sound		Farmer/Fisherman	6/460283	✓			✓		
44	Norman Knowles	Knowles		Fisherman	4715895	✓			✓		NE

CAF BANCO DE DESARROLLO DE AMÉRICA LATINA · C²EAU · CLIMATE FINANCE ACCESS NETWORK · viridia projects

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Farmers & Fishermen Consultation

Date: 27-5-26 Location: Huntley Christie High School Cafe

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	Ernestine McConnell	N Ai	Control 40 @ yahoo.com	Farming	8270437		✓			—	
2	Oscar Miller	Conch Sound	millmarcus195.gmail	Fishing	8029021	—			—		
3	Edgar Rolle	Love Sound		Fish	804-9161	✓			✓		
4	Willie Rolle	Love Sound	471 7252	Fishing	471 7252	—					
5	Charlie Rolle	The Fishing			808-8494	✓	+		✓		
6	Venencia Goodman	Nicholls Town	Venencia good@320.Gmail	Farming	491-1041 803-7538		✓		✓		
7	Kyresha mcqueen	Nicoll's Town		Farming	810-5307		✓	✓			
8	Shane Miller	Conch Sound		Fishing	4643072	✓			✓		
9	Dorisse Miller	Conch Sound	millergirl nassau242	farming	535-7781		✓		✓		
10	Kirkiethoe wallace	Red Bays	Kirkiethewallace160 gmail.	fishing	8146648	✓		✓			K. Wallace
11	Jerome Hemsley	Nicolls Town	Tuffy3010@yahoo	Poultry	457-3238	✓				—	
12	Polly Ann Newton	Mastic Point	Large Joyousnewton @ hotmail.com	Farming	471-1243		✓			✓	

CAF BANCO DE DESARROLLO DE AMÉRICA LATINA | C²EAU | CLIMATE FINANCE ACCESS NETWORK | viridia projects

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Sex (mark with an X) Female	Age (mark with an X) Under 35 years	Age (mark with an X) Between 35 and 60 years	Age (mark with an X) Over 60 years	Signature
13	Johnnie Mae Colebrooke	Mastic Point	small	farming	471-6385		—			✓	Johnnie Mae Colebrooke
14											
15	Francine Rose	Lowe Sound		fishing	5540455		—				B
16	Pauline Augustine	Nicholls Town		Farming	806-1046		—		—		
17	Jennifer Campbell	Morgans bluff		Farmer	820-5024		—				
18	L & G N C o L										
19	NANCY L MARSHALL	BARC Project		Farmer	5541091		—				
21	Esther Marshall	BARC Project	ginajob=1196@gm	Farmer	354-1125	—		+	—		
22	Johnnie mae	Colebrooke		Farmer	820-1066		✓	60	5		Johnnie mae
23											
24											
25											
26											
27											
28											
29											

5

CAF BANCO DE DESARROLLO DE AMÉRICA LATINA · C²EAU · CLIMATE FINANCE ACCESS NETWORK · viridia projects

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Farmers & Fishermen Consultation

Date: 27-5-26 Location: Huntley Christie High School Cafe

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	Letisha Azard	San Andros	azardletisha@gmail.com	Student	331-2348		✓	✓			
2	Rochelle Azard	San Andros	rochelleazard@gmail.com	Farmer	471 6908		✓		✓		
3	Sterling Sawyer	BARC	Erkis6342@gmail	FARMER	818-8354	✓				✓	
4	Joel Martin	Nashe Point	martinjjss@gmail	Fisherman Bus driver	471-3258	✓			✓		
5	Donnell Mackey	B.A.R.C	donnellmackey40@gmail	Farmer	464-3123		✓		✓		
6	Diann Mackey	B.A.R.C	diannmackey23@hotmail.com	farmer	464-3987		✓		✓		
7	Adrie McNeil	Queens Highway	adrieranno90@gmail.com	FARMER	828-6827		✓		✓		
8	Malinda Pageat Newton	Queens Hghway	mpageat45@gmail.com	Farmer	457-0656		✓		✓		
9	Leonard Newton	Queens Highway	leonardn1399@gmail.com	farmer	557-9389	✓			✓		
10	Brian Dorsett	San Andros	montova dorsett@yahoo.com	Farmer	471-9344	✓				✓	
11	Kendrick Lafleur	Lowe Sound	LEFKENDRICK88@Gmail.com	FISHERMAN	471-4409	✓			✓		
12	Joe Marshall	Red Bays	jaymarshall005@gmail.com	Fisherman	436-0852	✓			✓		

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
13	Melrose Nurse Moss	Lowe Sound	–	Fisherman	471-4706		✓		✓		M. E. D
14	Rex Moss	Lowe Sound	–	Fisherman	826-2874	✓			✓		R. Moss
15	Elvis DEAN	Lowe Sound		fisherMAN	553-8502	✓			..	✓	Elvis Dean
16	RoSalee Williams	Blanket Sound		Farmer	554-0882		✓			✓	R williams
17	~~Elisa~~ Geneva Olived	Lowe Sound	gelisaolive433@gmail.com	Farmer	802-0832		✓			✓	
18	ELIAS GRIFFIN	LOWE SOUND		FISHERMAN	4715299	✓				✓	E GRIFFIN
19	Roosevelt Taompia	Lowe Sound		Fish Farm	8240755	✓				✓	
21	TASHA Munnings	Nicolls Town	TASHAMunnings@gmail.com	LUNCH VENDOR	8208124		✓		✓		TASHA Munnings
22	Kendall Newton	Blanket Sound	Knewton@gmail.com	–	471-6052	✓				✓	
23	Stephen Murphy	Lowe Sound	Murphy34@icloud.com	Farming Fisherman	831-2297	✓			✓		
24	Peter Russell	Red Bay	russellsimone193@gmail.com	Fisherman	471-3104	✓			✓		P. Russell
25	Maria Russell	Red Bays	–	Farmer	428-8435		✓		✓		M Russell
26	Cam Lightbourne	BREC-BAMSI	clightbourne@bamsibahamas.edu.bs	Producer	471-9613	✓					
27	Moses Marshall	Staniard Creek		Fisherman	471-2244	✓			✓		M Marshall
28	Sabathiel Mott	Staniard Creek		Fisherman	433-4275	✓		✓			S Mott
29	Shakur Gaitor	Nicholls Town		Farmer	554-7449	✓		✓			S.G

CAF BANCO DE DESARROLLO DE AMÉRICA LATINA | C²EAU | CLIMATE FINANCE ACCESS NETWORK | viridia projects

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Farmers & Fishermen Consultation

Date: 27-5-24 Location: Huntley Christie High School Cafe

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	Levonia Colebrooke	Red Bays	levoniaColebrooke 9301@gmail.com	Farmer	8173904		✓		✓		
2	Timothy Sweeting	Mastic Point	sweetingo77@	Fisherman	471-2682	✓		✓			
3	Jonathan Fowler	Mastic Pt		Fisherman	471 4943	✓				✓	
4	Austin Comyadell	Lowe Sound	austincafe@mail.com 677	Fisherman	822-7106	✓			✓		
5	Sean Evans	Lowe Sound	SeanEvans540@gmail	Fisherman	4643118	✓			✓		
6	Tadra Johnson	Mastic Point	Specialty780@gmail.com	Fishing	804-4205		✓		✓		
7	Lynden Gail	Nicholl Town	Skippers Bac 79@bolmail	Farmer	5347099	✓					
8	Leon Storr	Highway	Storrand Storr@	Farmer Livestock Fish	822-0961	✓			✓		
9	Tessilee Rolle	Lowe Sound	tessileerolle@gmail.com	Farmer	815-1796		✓		✓		
10	Samuel Fowler	Mastic Point	Samuel1949fowler@gmail	FARMER	464-3377	✓				✓	
11	Corelee Fowler	Mastic Point	Corelee.fowler2@gmail.com	Fishing	554-7242 471-8000		✓			✓	
12	Nigel Sands Jr	N/A	Nigel@Birdg.net	Business	808-0871	✓		✓			—

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
13	Georgette Colebrooke	Mastic Point	elize.28@Hotmail.com	Restaurant	242)472-2642	(M)	(F)	4/20	✓		G. Colebrooke
14	Steffen Russell	Mastic Point		Tools Rental	471-7872	✓			✓		S. Russell
15	Johnimea Colebrooke	Mastic Point		Farmer	4643296		✓			✓	J. Colebrooke
16	Danero Newton	Mastic Point		Fishermen		✓		✓			D. Newton
17	Precious Sweeting	Mastic Point	sweeting017@g	Fisherman	455 7962		✓		✓		Sweeting
18	Joann Knowles	Highway	misshnowles996	Farmer livestock fisherman	471-5578		✓		✓		J. Knowles
19											
21											
22											
23											
24											
25											
26											
27											
28											
29											

CAF BANCO DE DESARROLLO DE AMÉRICA LATINA · C²EAU · CLIMATE FINANCE ACCESS NETWORK · viridia projects

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Farmers & Fishermen Consultation

Date: 27-5-26 Location: Huntley Christie High School Cafe

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	Rashad Thompson	Howe Sound	GroundSpider187@hotmail	Fisherman	462-7069	✓		✓	38		
2	Agrett Lightbourn	SAN ANDROS	AGRETTLIGHTBOURN@GMAIL.COM	FARMING	852-5979	✓				✓	
3	Mitchell Johns	Lowe Sound		FARMING	4715427	✓				✓	
4	Hound Woodside	Stafford Creek		Fishing	5547705	✓				✓	
5	Robert [illegible]	Mastic Point	Rashaughal@gmail.com	Fishing	4546093	✓			✓		
6	Orlando Hunter	N/A	hunterssurveying@gmail.com	Agri	5569872	✓				✓	
7	Jaroma Nodd	Mastic Point	@gmail.com	Farming	471-0025	✓	✓			✓	Jaroma Nodd
8	Dorothy Nodd	"	DorothyNodd59@gmail.com	"			✓			✓	Dorothy Nodd
9	Eldrick Newton	Lowe Sound	eldrick.newton@gmail.com	farmer	3244248 5547414	✓				✓	
10	Caleb Evans	Mastic Point	Calebandalmeimiraevans@hotmail.com	farming	329-3051	✓				✓	
11	Kate Cumberbatch	Nicholls Town	Kate.d.cumberbatch@gmail.com		802-5988		✓		✓		
12	Floyd Newton	North Andros	floydnewton70@gmail.com	Farming	456 8618	✓				✓	Farming

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
13	Navado Sweeting	Mastic Point	navadosweeting13@gmail.com	Fisherman	818-3968	✓			✓		
14	Veronica Sweeting	Mastic Point	Sweeting learleen@gmail.com	Used to farm	471-2301		✓		✓		Sweeting
15	Janfur Clarke	BARC	Janfur.cla	farming	822-4362	✓			✓		
16	Nelson Roberts	Morgans Bluff	Nelsonroberts	fishing	554-7412	✓		✓			
17	Janfur Clarke	BARC	Janfurclarke 14@gmail.com	farming	822-4362		✓		✓		J. Clarke
18	Rosetta Boom	QH	rosettaxboom 20@hotmail.com	farming	376 6820		✓		✓		
19											
21											
22											
23											
24											
25											
26											
27											
28											
29											

CAF BANCO DE DESARROLLO DE AMÉRICA LATINA · C²EAU · CLIMATE FINANCE ACCESS NETWORK · viridia projects

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Farmers & Fishermen Consultation

Date: 27th - 5 - 26 Location: Huntley Christie High School Cafe

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	Shantell Riley	BARC	shantellriley06@gmail.com	Farming	471 6463		✓		✓		Riley
2	Marina Newton	San Andros	angelaneww06@gmail.com	Farmer	467-7699		✓			✓	
3	Rekeem Azard	San Andros	azardrekeem242@gmail.com	Farmer	471-0871	—		✓			
4	Dexter Frazier	Staniard creek	dexterfrazier48@gmail.com	Fisheries	801-7406	—			—		D. Frazier
5	Shemica Frazier	Staniard creek	shemica77@gmail.com	Fisheries	809-6384		—		✓		Frazier
6	Lorina Lafleur	BARC	lorina	Farming	816-0675		✓	✓			
7	Leona Lafleur	BARC	nature stream beachMR@gmail	farming	" "	✓				✓	
8	Vanessa Newton	Mastic Point		Gas station			✓		✓		V. Newton
9											
10											
11											
12											

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Sit Visits (Farmers/Fishermen)

Date: 28-May-2026 **Location:** North Andros

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
1	Tina Butler	San Andros		Farming			✓		✓		
2	Rev Eldrick Newton	Queen's Highway		Farming	554-1077	✓				✓	
3	Craig Newton	Queens Highway.		Farming	554-7389				✓		
4	Michelob Rolle	Red Bays	michelob Rolle@gmail	Fisherman	821-1970	✓			✓		M Rolle
5	Jim Knowles	Red Bays	—	Fisherman	815-6280	✓			✓		Jim Knowles
6	Kevin Brown	Red Bays	80W 6909	Fisherman	80W-6909	✓			✓		Kevin Brown
7	Wyena Russell Colebrook	Red Bays	—	Fishing	471-7709		✓			✓	Wyena Russell
8	Rex Moss	Lowe Sound		Fishing	826-2874	✓			✓		
9											
10											
11											
12											
13											

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Women Farmers

Date: 28-5-2026 **Location:** Administrator's Office

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	Dorothy Nood	Mastic Point	dorothy Nood 59@gmail.com		471-0005		✓		✗	✓	Dorothy Nood
2	MARY L. MARSHALL	B.A.R.C. PROJECT	Mary-L Marshall 242@gmail.com		5541091		✓		✓		M.L. Marshall
3	Nicole Lafleur	Barc project			471-1647		✓		✓		N. Lafleur
4	Rochelle Lafleur	Barc	laffleurochelle@ gmail.com		8162846		✓		✓		
5	Carmetta Taylor				4375423						
6	Polly Ann Newton	Mastic Point	joyousnewton@hotmail.com	Farmer	471-1243		✓			✓	
7	~~Corakee Fowler~~	~~Mastic Point~~									
8	Nadia Seymour	Mastic Point	nadiaseymour30@gmail.com		6862199		✓		✓		
9	Corakee Fowler	Mastic Point	Corakee.fowler@gmail.com		471-8000		✓		✓		
10	Mary Fowler	Conch Sound			4455617						
11	Alfreda Mackey	BARC	Freda2011@gmail.com/Farmer		813-9644		✓		✓		
12	Anthia Knowles	Nichol's Town	anthiaknowles27@gmail.com	Backyard farming	464-3239		✓	✓			A. Knowles
13	Jennifer Campbell	Morgan's Bluff	Jennifercampbell@gmail.com		8205084		✓			✓	

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X)		Age (mark with an X)			Signature
						Male	Female	Under 35 years	Between 35 and 60 years	Over 60 years	
32	Erica Joseph Marshall	Q H	ericajoseph@live.com	farmer	6036-6604		✓		✓		
33	Shalena Russell	L S		farmer	824-0281						
34	PARSY LAFLEUR	L. S. A	P58.GMAIL.COM	FARMER	806 3867		✓				
35	Johnielee										
36	Colebrooke	Nastic Point		Farmer	471-6385		✓			✓	J. Colebrooke
37	Marina Newton	San Andros	angelaneweo@gmail.com	farmer	467-7699		✓		✓	✓	
38	Sislyn Farrington	L-S-A	Sislynfarrington2020@gmail.com	farmer	5647338		✓		✓		
39	Jessielee Rolle	Lowe Sound	jessieerolle@gmail.com	farmer	8151796		✓		✓		
40	Shantell Ryley	Bare / Blanket Sound	shantellryley06@gmail.com	farmer	471-6463		✓		✓		
41	Lorina Lafleur	BAK	naturedream bahamas@gmail.com	farmer	816-0675		✓	✓			
42											
43											
44											

Resilient Food Island Project:
Enhancing Local Adaptive Capacity of Andros Island for Climate Resilient and Sustainable Food Systems

Attendance List

Session: Site Visit Farmers

Date: 29-5-2026 **Location:** North Andros

	First and Last Name	Community	Email	Industry/sector	Phone	Sex (mark with an X) Male	Female	Age (mark with an X) Under 35 years	Between 35 and 60 years	Over 60 years	Signature
1	Fedlin	BARC	Quatorzefedlin@gmail.com	Farming	554-1077	✓			✓		Fedlin
2	CARLOS SARGENT	BARC	carlos Sargent@hotmail.com	FARMING	5541829	✓			✓		
3											
4											
5											
6											
7											
8											
9											
10											
11											
12											
13											

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

ANNEX I: Initial Gender Assessment (v.2)

R4R-02: Resilient Food Island - Enhancing Local Adaptive Capacity of Andros Island for Climate-Resilient and Sustainable Food Systems

The Bahamas | Adaptation Fund Concept Note stage

Note on this condensed version. This document summarizes the longer Initial Gender Assessment originally submitted with the Concept Note and has been condensed to comply with the Adaptation Fund page limit. In the first Concept Note submission, gender considerations were integrated across the relevant sections of the Concept Note. Following the Fund technical review recommendation, that analysis has been extracted, consolidated and presented as a separate annex, now summarized to fewer pages.

1. PURPOSE, SCOPE AND METHODOLOGY

This Initial Gender Assessment identifies the principal gender-differentiated vulnerabilities, capacities, barriers and opportunities relevant to the proposed adaptation intervention. It is aligned with the Adaptation Fund Gender Policy and Gender Guidance and is intended to inform full proposal design; it does not constitute a Gender Action Plan.

The assessment draws on the gender and social inclusion analysis undertaken during Concept Note preparation; national census, policy and climate-vulnerability information; consultations held between April and June 2026; the May 2026 originating mission; and a dedicated consultation with women farmers. A full Gender Assessment and Gender Action Plan will be prepared during full proposal development, supported by additional sex-, age- and disability-disaggregated data and targeted consultations.

2. GENDER AND SOCIAL INCLUSION CONTEXT

Andros has 7,695 inhabitants, 50.3 percent of whom are women. Poverty is estimated at 17.3 percent, above the national average, while 42 percent of households nationally are female-headed. The prevalence of persons with disabilities in Andros (4.37 percent) is also higher than the national average, and many face limited insurance coverage and barriers to services, warnings, evacuation, training and project benefits.

Women generally achieve stronger educational outcomes than men but continue to face unequal labour-market outcomes and remain underrepresented in technical and vocational occupations. Agriculture and fisheries are male-dominated at the primary production level, while women are active - often informally and with limited visibility - in processing, vending, marketing, administration, crab harvesting and small-scale food transformation. Their lack of formal registration can restrict access to producer organizations, finance, insurance, public support and recovery mechanisms. Women also carry disproportionate unpaid care responsibilities, which can limit participation in training, consultations and leadership opportunities.

3. GENDER-DIFFERENTIATED CLIMATE VULNERABILITY AND IMPACTS IN ANDROS

Gender-differentiated climate risks in Andros arise from the interaction between low-lying exposure, remoteness, fragmented transport links and gendered livelihood roles. In North Andros and coastal settlements such as Lowe Sound, hurricanes, storm surge, flooding and saline intrusion can damage homes, farms, fishing assets, roads, docks, storage and processing facilities. Women-led and low-income households may have fewer resources for temporary relocation and recovery, while persons with disabilities and older people can face additional barriers to warnings, evacuation and access to essential services.

Climate impacts also affect women through their roles in processing, vending, marketing, administration and household care. When landing sites, cold storage, transport routes or markets are disrupted, women may lose income even where crops or catches survive, while household food, water and care burdens increase. Extreme heat is a particular concern in processing and administrative facilities such as the BAIC Packing House, where inadequate insulation, ventilation and cooling may create occupational health risks, especially for women workers and pregnant women.

4. KEY GENDER FINDINGS AND IMPLICATIONS FOR PROJECT DESIGN

Key finding	Implication for full proposal design
Women are active across food value chains, but many roles are informal or absent from producer records.	Map formal and informal roles and ensure that registration, tenure or business-documentation requirements do not exclude eligible women.
Women, female-headed households, youth and low-income producers often have more limited access to assets, finance, credit and insurance.	Assess affordability and financial-access barriers and establish transparent, low-burden arrangements for infrastructure and productive support.
Unpaid care responsibilities and dispersed settlements constrain women participation in training, consultations and leadership.	Use flexible schedules, accessible locations and delivery formats that address mobility, transport, connectivity and caregiving constraints.
In North Andros, women are concentrated in processing, vending and administrative roles and may face heat exposure in facilities such as the BAIC Packing House, as well as income losses when docks, cold storage, transport routes or markets are disrupted.	Integrate heat stress, ventilation, cooling, occupational safety and continuity of access into facility and infrastructure design.
Andros' dispersed settlements, remoteness and fragmented transport links can intensify barriers faced by persons with disabilities, older persons, youth and isolated communities in accessing warnings, evacuation, facilities, training and grievance mechanisms.	Apply universal-access principles and ensure accessible communication, consultation, infrastructure and grievance channels.
Shared infrastructure and support could be captured by formally registered or better-connected actors.	Define transparent eligibility, governance, pricing, targeting and monitoring arrangements to prevent exclusion and elite capture.
Women are already applying diversification, intercropping, drip irrigation and market innovations.	Recognize women as producers, entrepreneurs, innovators and knowledge holders, not only as vulnerable beneficiaries.
Displacement and shelter use may increase safety and GBV risks, particularly for women and girls with disabilities.	Integrate confidential and gender-responsive safety considerations, referral pathways and grievance procedures into project safeguards and disaster planning.

Docusign Envelope ID: 9DBE8CF4-43CC-8B78-81FE-97288FC0F2CE

5. CONSULTATION FINDINGS RELEVANT TO GENDER

Gender considerations were addressed throughout the Concept Note consultation process. Consultations took place between April and June 2026 through kick-off meetings, coordination meetings with CCEAU, CFAN and CAF, virtual bilateral consultations, an originating mission with site visits and stakeholder consultations in New Providence and North Andros, and post-mission follow-up discussions.

During the May 2026 originating mission, the project team engaged government agencies, technical institutions, academia, producer organizations, civil-society organizations, development partners, private-sector representatives, local government representatives, farmers, fishers and community members. A total of 212 stakeholder engagement instances were recorded during the mission, 52 percent involving women. Across the Concept Note stage, 231 stakeholder engagement instances were recorded, 53 percent involving women. These figures refer to recorded participation rather than unique individuals.

A dedicated bilateral meeting with the Department of Gender and Family Affairs highlighted the importance of ensuring equitable access to employment, livelihood opportunities, infrastructure, training and support mechanisms for both women and men. The Department also recommended accessible consultation formats and women-only discussions where appropriate.

A dedicated consultation with 21 women farmers was conducted during the field mission. Participants identified access to finance, equipment, technology, flexible training opportunities and improved weather and climate information as key needs. They also highlighted the additional challenges created by extreme heat and expressed interest in strengthening collaboration among women engaged in agriculture. These findings indicate the need for project design to address the practical constraints that affect women participation, including timing, location, care responsibilities, information access, financing requirements and formal registration barriers.



Meeting with group of women farmers, 28 May 2026

6. PRIORITIES FOR THE FULL PROPOSAL STAGE

Full proposal preparation will deepen the assessment through disaggregated baseline data; targeted value-chain mapping and consultation with women, youth, persons with disabilities, fishers, farmers, informal producers and low-income households; analysis of access, affordability, tenure and documentation barriers; assessment of institutional gender capacity and safe GBV referral pathways; and validation of accessible stakeholder engagement and grievance mechanisms. The findings will be translated into a Gender Action Plan with activities, indicators, targets, responsibilities and budget.

Source note: Prepared from the Concept Note evidence base, including the 2022 Population and Housing Census, national gender and climate policy documents, previous vulnerability and gender assessments, and stakeholder consultations conducted between April and June 2026.