

GOVERNMENT OF ANTIGUA AND BARBUDA

DEPARTMENT OF ENVIRONMENT



STRATEGIC PLAN

STRATEGY FOR THE PROTECTION OF THE ENVIRONMENT AND THE SUSTAINABLE DEVELOPMENT OF ANTIGUA AND BARBUDA 2017-2018



DEPARTMENT OF ENVIRONMENT

Definitions

A government **department** is an entity formed by the passage of legislation in the house of parliament to perform specific functions and mandates outlined within the act that creates it. A department may have its own policies and procedures for all of its functions with the exception of some aspect of Finance Act (such as borrowing) and legal affairs. The central government may delegate some of its functions to be controlled and managed by the department.

A **division** is formed via a decision of the cabinet to perform a specific function. All human resources, legal, treasury etc. are performed by central government. A division may be provided with some latitude to perform some of these functions, this is at the discretion of the cabinet and the ministry in which the division resides.

Green Climate Fund was created by the United Nations Framework Convention on Climate Change (UNFCCC), the fund aims to support a paradigm shift in the global response to climate change. It allocates its resources to low-emission and climate-resilient projects and programs in developing countries. The fund pays particular attention to the needs of societies that are highly vulnerable to the effects of climate change, including Small Island Developing States (SIDS). The Green Climate Fund was established by 194 countries party to the UN Framework Convention on Climate Change in 2010. It is designed as an operating entity of the convention's financial mechanism and is headquartered in the Republic of Korea. It is governed by a 24 member board, representing countries, and receives guidance from the Conference of the Parties to the Convention (COP).

Direct Access Entity; these could be local or national governments, civil society or private sector agencies. Under the direct access route, a country can select one or more entities to access, manage and distribute project funding — without going through multilateral agencies. This modality is currently available through the Adaptation Fund and the Green Climate Fund. Giving countries direct access to funds is designed to increase ownership over projects and improve institutional capacities; each entity seeking to direct access funds is expected to adhere to stringent accreditation requirements. Direct access also places climate finance under the democratic accountability and control systems of the country concerned.

The **St. George's Declaration of Principles for Environmental Sustainability** is the OECS regional strategy for environmental management. It was originally agreed in 2001 and revised in 2006.

Acronyms

AF Adaptation Fund

BUR Biennial Update Report

CBIT Capacity Building Initiative for Transparent

CCCD Cross Cutting Capacity Development

CIP Citizenship by Investment

CITES Convention on International Trade on Endangered Species

CN Circulation Note

DCA Development Control Authority
DNA Designated National Authority
DOE Department of Environment
EBBA Ecosystem-based Adaptation

EIA Environmental Impact Assessment

EIMAS Environmental Information Management Advisory System

EMS Environmental Management System

EPMA Environmental Protection and Management Act, 2015

GCCA Global Climate Change Alliance

GCF Green Climate Fund

GEF Global Environment Facility
GIS Geographic Information Systems

GRULAC Group of Latin America and Caribbean states

IADB Inter-American Development Bank

INDC Intended Nationally Determined Contribution

IRENA International Renewable Energy Agency

IUCN International Union of Conservation of Nature

IWCAMIntegrated Wastewater ManagementIWECOIntegrated Water Lands and EcosystemsMANA ProgramMen Against Negative Attitudes ProgramMEAMultilateral Environmental AgreementMEPA TrustMarine Ecosystems Protected Areas Trust

MOA Ministry of Agriculture

MONP Mount Obama National Park
MOU Memorandum of Understanding

NAPS National Adaptation Plan

NBSAP National Biodiversity Strategy and Action Plan

NCM National Coordinating Mechanism

NEA National Executing Agency

NEMS National Environmental Management Strategy

NIP National Implementation Plan

OECS Organization of Eastern Caribbean States

PIF Project Identification Form

PMC Project Management Committee

PMU Project Management Unit
POPS Persistent Organic Pollutants
PPG Project Preparation Grant
SCCF Special Climate Change Fund

SCP Sustainable Consumption and Production

SGD St. George's Declaration of Principles for Environmental Sustainability

SIDS Small Island Developing States

SIRF Fund Sustainable Island Resource Framework Fund

SIRMZP Sustainable Island Resource Management Zoning Plan

SPPARE Sustainable Pathways -- Protected Areas and Renewable Energy

SPP Sustainable Procurement Policy
TAC Technical Advisory Committee
TNC Third National Communication

TOR Terms of Reference

UNEP United Nations Environment Program

VPBG Victoria Park Botanical Gardens

WED World Environment Day
YFP Year Framework Program

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Vision of the DOE

The Department of Environment (DOE) is moving from a division within the government to a department which have a certain amount of autonomy from central government. The vision of the DOE is to move towards an operational modality of a private sector advisory and project and program implementation entity. The DOE will restructure its organization to be responsive and efficient and to allow its staff opportunities to grow and earn higher salaries and to maximize their skills in all areas of the operations of the DOE. The DOE will also seek to fulfil its role within the Organization of Eastern Caribbean States (OECS) to take the lead as a climate finance mentor to the other member states and to assist the other member states to access GCF readiness support.

The DOE vision for its staff is to provide a place for professionals to realise their full potential and career path. To provide a clear path for growth and development for each staff member and where possible to position themselves for any and all opportunities that may be available to them.



"The importance of the environment is unquestioned. This government has demonstrated a care and concern for the environment that no other government can boast.

This strategic plan will be a framework document that supports our mission to become an economic powerhouse built on a foundation of environmental sustainability and wellness."

Minister Molwyn Joseph

Minister of Health and the Environment

Minister Molwyn Joseph presenting to COP21 in Paris, France

Introduction/Background

The Department of Environment (DOE), formerly known as the Environment Division, was formed in 1996 by a cabinet decision and was mandated to perform a number of functions. In 2015, with the passage of the Environmental Protection and Management Act (EPMA) by parliament, the division was transformed into a department of the government. As a department, the DOE will now need to act as a quasi-statutory body. This means that the department has the legal authority to manage all of its affairs with considerable amount of independence from the ministry and central government. The DOE must therefore establish its own policies with respect to *inter alia* administration, human resources, accounts, procurement, etc. for the approval of the Project Management Committee (PMC) and where appropriate the cabinet. In the case of the funding appropriated from the government, the treasury function is still maintained by central government. The DOE and the Sustainable Island Resource Framework (SIRF) Fund will manage all funds from external donors as well as national fees, levies, international environmental donor funding, etc.

The period of 2015 – 2017 is the time of transitioning from a division to a department. The DOE is managing this transition by documenting its current policies, procedures and manuals, and where appropriate seeking to update these. This process is being driven by the need to implement the Environment Protection and Management Act 2015 and to fulfil the mandate to be accredited to the Green Climate Fund (GCF) and the Adaptation Fund as a Direct Access Entity. Both the national laws and the accreditation requirements demands high fiduciary standards. As of 2015, the DOE has already achieved accreditation to the Adaptation Fund.

Finally, the transitioning of the DOE is driven by the need to operationalize the SIRF Fund and to manage national and international resources to provide general environmental benefits for all. The DOE is expecting that by 2018 it will be programming between 10M - 15M USD per year in projects and programs. Most of these funds will be programed in the area of climate change from grants, loans and other types of financing, including private sector financing.

More detailed information on the DOE and is technical and operation procedures can be found in the Technical and Operational Manuals.

GENERAL MANDATE OF THE DOE

The Environmental Protection and Management Act (EPMA) 2015 provided the DOE with the legal mandated to:

- Function as a department of the Government of Antigua and Barbuda, with rules and regulations for the management of government resources entrusted to the DOE.
- Maintain an up-to-date national environmental policy, which includes plans and strategies for the management of climate change, pollution, water quality, air quality, watersheds and wetlands, biodiversity and traditional knowledge, protected areas, beach and coastal protection. The national policy will be used to guide interventions in the management of natural resources, physical planning and development financial strategies to sustain environmental management, as well as programming priorities for the SIRF Fund.
- Engage the public in national environmental awareness. This is to include the introduction of environmental education into the school curriculum and interventions to raise the level of awareness on environmental matters through regular media programing.
- Develop and implement projects related to the rehabilitation and protection of the environment.
- Identify and coordinate the implementation of Antigua and Barbuda commitments to Multilateral Environmental Agreements (MEAs). This will include coordinating the implementation of recommendations from the National Coordinating Mechanism (NCM).
- Develop and enforce regulations in all areas of environmental management.
- Design and implement a program to protect and enhance the beaches and coastal zones.
- Provide advice to the general public and other government agencies on environmental issues, and manage the environmental complaints procedure.
- To coordinate the process of conducting Environmental Impact Assessments (EIAs) for all applicable developments. In addition, to request operational impact assessments for existing businesses.
- Produce a State of the Environment Report every two years, to include a comprehensive natural resource map. This report should give comprehensive information on the health of the environment including impacts upon human health, i.e. water and air pollution, and pollutants/chemicals in food. The natural resources map, which will accompany the report, will identify major areas of importance to the health of the environment such as watersheds, coral reefs, mangroves, forests and protected areas.

- Develop, implement and report on any other activity as directed by the cabinet, minister or permanent secretary.
- Staff career development and training.

Special note:

With the passage of the Environmental Protection and Management Act (EPMA) 2015, the Director of the DOE is also the Chief Forestry Officer. Further the EPMA 2015 repealed sections of the Physical Planning Act (PPA) 2003, such that the DOE now manages the Environmental Impact Assessment process, and any area declared protected under that PPA 2003 will be managed by the DOE.

At the time of the preparation of this Strategic Plan, the role of the Forestry Unit was not included. This will be reviewed and at the appropriate time the Strategic Plan will be updated to reflect the integration of that unit within the DOE.

OVERALL 10 YEAR GOALS FOR THE DOE

The overall goals for the various areas of the DOE have been set by the DOE in consultation with the minister and the cabinet and communicated in various documents. The overall strategic goals to be accomplished between 2017 – 2027, are:

100% of the wetlands and waterways remaining are legally protected and managed. Hydrological resources are all mapped using geographic information systems (GIS) and the land owners are known and in communication with the DOE. Management plans are in place for each of these and the public are fully aware and appreciate the role of wetlands and waterways to their economic, health and environmental welfare. The management decisions regarding these areas are made based on the precautionary principle where it is preferable to avoid damage due to the expense and difficulty in repairing damage to ecosystems and their services.



Minister Molwyn Joseph at the launch of the Plastic Bag Ban and Bicycle Rack Project

2. The Access and Benefits Sharing (ABS) regime is up and running and the DOE is processing applications on a regular basis. It is the goal of the DOE to attract a relevant institution to establish a research center within the Bendals Botanical Gardens site in Antigua and to promote the use of plants for medicinal purposes.

- 3. The Environmental Impact Assessment (EIA) process is supported by the Environmental Information Management and Advisory System (EIMAS) to ensure that the EIAs and their review will take 4 weeks or less. The DOE will have local area plans for all watersheds in the country by 2025. This will allow the Development Control Authority (DCA) to be fully equipped with the information they need to make planning decisions. This will also allow for accurate assessment of insurance risk for the country and could result in more reasonable insurance rates.
- 4. The Sustainable Island Resource Framework (SIRF) Fund is fully operational and programming over 15M USD per year in funding for climate change adaptation and mitigation. The aim is also to support funding for the Revolving Fund program of 10M USD per year for homes and businesses in Antigua and Barbuda. The Revolving Fund will be fully functional with its director, chief financial officer, and accounting officers, and will be demonstrating concrete results on the ground.
- 5. The OECS regional SIRF Fund is also established and headquartered in Antigua and Barbuda, and programming readiness funding to those OECS member states that do not have a direct access accredited entity in country.
- 6. The National Environmental Management Strategy (NEMS) is completed and reflects these overall national targets, and those in the OECS St. George's Declaration of Principles for Environmental Sustainability.
- 7. All policies, reports, etc., for the relevant international agencies are prepared to reflect the culture, beliefs and best available science in Antigua and Barbuda and the OECS. The DOE supports the precautionary approach and takes action to protect environmental resources even when in doubt.
- 8. The Access to Justice Program can be used by the private sector and NGOs.
- 9. The System of Protected Areas can be managed through public-private partnerships, with communities and NGOs. A program for this will be developed and presented to the cabinet in 2017.
- 10. Pollution sources are identified and mapped. The government can use this data to map possible clusters of illnesses around the island. The polluter pays principle is fully understood nationally and strategies developed to implement it.
- 11. Pollution in the energy sector (electricity and transport) is reduced by 50%. This will mean 25MW of off grid and islanded electricity and the infrastructure for electric vehicles in place.
- 12. In the area of climate change adaptation:

- a. To ensure that at least 40 percent of homes in Antigua and Barbuda are fully able to remain unharmed by a category 5 hurricane.
- b. All essential services in government and the private sector work during and immediately following a storm. To ensure that the country can generate 100% of its water from reverse osmosis and the energy to power these plants is 100% renewable.
- c. Each clinic and hospital can continue to operate fully during and after a tropical cyclone, severe rain fall events and during severe drought and excessive heat conditions.
- d. To ensure that the waterways are improved to prevent flood in the event the country experiences 10 inches of rain in less than 12 hours.
- e. Vulnerable persons and their families in the event of a disaster can identify and access shelters that are equipped to handle the needs of women, single parent families, persons with handicaps, young men and women, other persons with special circumstances and disabilities.
- f. Farmers can have access to desalinated water during a drought at a reasonable cost
- g. All schools both public and private, prisons and other community centres have access to air-conditioned rooms that provide relief from extreme heat.
- 13. All major operations and buildings in Antigua and Barbuda have Environmental Management System (EMS) plans in place and are reporting according to the agreements with the DOE. These plans reduce the cost of business operations, track waste and pollutants, reduce risks of occupation-related illnesses and provide the foundation for a competitive economy.
- 14. Establish a research protocol for Antigua and Barbuda and generate and produce research on all environmental issues, with support from certified laboratories, and in a way that promotes experiential learning and skills building through internships and student involvement.
- 15. To ensure that the EIMAS is designed to provide ease of access to information for planning, economic and environmental decision-making, education and any other uses that the country may need now and in the future.
- 16. To develop a culture of negotiation and participation of nationals in the international MEA negotiation process and to provide opportunities for these in international agencies both in the regional and international circles.

- 17. To play a prominent role in international negotiations, to serve on committees, boards and in other capacities that will build our national capacity and recognition to leverage our small size and vulnerability to the benefit of the country.
- 18. To become accredited to the Green Climate Fund (GCF) for direct access in the category of small (up to USD 50 million per project), for all risk levels. In the future, the DOE may consider being a regional accredited entity to support those countries within the region who do not have a national accredited entity.
- 19. That the OECS become accredited to the GCF such that they can program projects for Antigua and Barbuda.

In achieving the above, there will be persons and entities who could break the laws both natural and man-made, and for this the DOE will establish a robust system of compliance that relies on extensive education, public awareness and soft enforcement. Where this fails the DOE will have the capacity to ensure that the proponent is met with the full force of the law.

The DOE vision for its staff is to provide a place for professionals to realise their full potential and career path. To provide a clear path for growth and development for each member of staff and where possible, to position them for any and all opportunities that may be available to them. The DOE will prepare training and other policy documents that will provide flexibility and clarity for staff to work remotely, be seconded to international and regional institutions and to take time to study.

The policy will also recognize that as an accredited entity to the GCF and AF, the DOE will need to review its remuneration structure if it is to attract and maintain highly qualified staff and to reward dedication and commitment.

Implementation Details - Priorities 2017-2018

"A Functional Approach"

The implementation of the DOE work plan is along functional lines rather that a structural organizational chart. This allows for the DOE to be flexible and nimble in the implementation of its projects and programs.

The legislative mandate of the department is far-reaching and impact the function of the government system, NGOs and the private sector. The number of outputs to be accomplished must therefore be balanced with the need to achieve impact and concrete results. Further, this strategy's main focus is the transition of the DOE from a culture of serving as a division to that of a department with a culture of professionalism and efficiency. This transition will include development of policies, operational manuals, training, and the passage of regulations to give effect to the policies. This process began as early as 2013 and will be completed by December 2017. The pace of the transition is dependent on available funds.

To achieve this balance of work program and the operationalization process for serving as a department, the following actions are identified as a priority for 2017-2018. These actions pertain to:

- Office of the Minister
- Office of the Director of the DOE
- Natural Ecosystem and Biodiversity Management(NEBM) Unit
- DOE Operations Unit
- Environmental Quality and Control
- Monitoring, Evaluation and Data Management Unit
- Project Management Unit
- Compliance and Access to Justice Unit
- Sustainable Island Resource Framework Fund (SIRF)

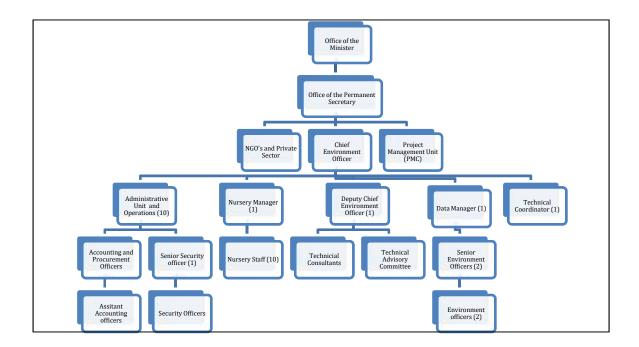
These units and priority actions are detailed in the subsequent sections.

Moving from a Division to a Department

The DOE has a current organization chart that reflects a typical civil service structure where there is s chief and a deputy chief. The EPMA calls for a director and does not mention a deputy director. Although a deputy director or deputy directors may be appointed by the Minister.

This current structure relies on the presence of either one of the two senior officers to be present for the DOE for it to run smoothly. Since the DOE manages the conventions and implement projects the director and the deputy director, situations are such that both have frequently be out of office at the same time.

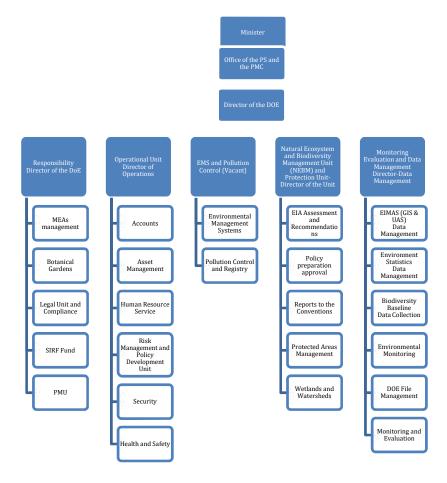
THE CURRENT ORGANIZATION CHART OF THE DIVISION



The proposed new organizational chart will create a post of several deputy directors. Each of which can be an established and or non-established post. It will ensure that the director may now delegate authority to several officers while maintaining the necessary quality controls and separation of duties where appropriate.

The new structure will need the approval of the cabinet and staff appointed by the minister or the establishment department. The exact process will be outlined within the operational manual after this section of the act is amended to make this process even clearer.

PROPOSED NEW ORGANIZATIONAL CHART FOR THE DEPARTMENT



Reporting and Evaluation of the Implementation of the Strategy

The DOE reporting and evaluation standards and process is outlined within the Technical Manual of the department. Each head of unit is required to ensure that each member of their team (with a few exceptions, e.g. nursery staff) prepare monthly reports. This is true for the established and the non-established staff, permanent and/or project staff.

Monthly reports are due for submission and review each month and will be part of the evaluation of performance.

The Director is required to provide quarterly reports in the progress of the DOE to the permanent secretary and the minister.

Office of the Minister

H.E. HON. MOLWYN JOSEPH: MINISTER OF HEALTH AND THE ENVIRONMENT (JUNE 2014 – PRESENT)

The role of the Office of the Minister is outlined in the EPMA 2015, Part II Administration. The section called for the minister to ensure collaboration between agencies and to ensure consistency and collaboration. The minister's role is subsequently developed throughout the act to allow the minister powers to include, but not limited to, the following:

- 1. The gazette of regulations when changes are required;
- 2. Lay the EPMA regulations in parliament once developed;
- 3. Give the DOE special or general directions for the duties conferred under the EPMA, and delegate additional functions to the Director of the DOE as necessary;
- 4. Appoint inspectors and authorised officers;
- 5. Collaborate with other ministers when agreeing to and developing policies and measures, in particular the Policy Framework, and lay the same in parliament;
- 6. Convene the Watersheds and Wetlands Committee in collaboration with the minister responsible for utilities;
- 7. Designate closed areas, within or outside of protected areas, as necessary for the survival of a species, ecosystem or biological resource;
- 8. Appointment of the board of the SIRF Fund and observers to the SIRF Fund;
- 9. Establish the Appeals Committee, make appeals decisions and participate in dispute resolution where issues are escalated;
- 10. Designate at least one scientific laboratory for the purposes of the EPMA; and
- 11. Review the annual report of the DOE, the bi-annual State of the Environment report, and lay the same in parliament.

The minister is responsible for taking policies, staffing, financial request to the cabinet for approval.

Office of the Director of the DOE

RESPONSIBLE OFFICER: DIANN BLACK-LAYNE, DIRECTOR

Overall guidance and management of the DOE, with specific responsibilities for: operational and technical policies, the legal unit, compliance and enforcement, financial, MEAs, and education and public awareness. The current director is also the Ambassador for Climate Change and serves as a representative of GRULAC on the Green Climate Fund Board. The office of the director will accomplish the overall goal of the DOE with staff 100% dedicated to the functioning of this office as well as staff whose time is divided between various units. The director is also assisted from time to time by consultants. The Office of the Director will also support the PMC, the board of the SIRF Fund, and MEPA Trust. The director also represents the DOE on cross-sectorial permanent committees such as the boards/committees including the Dog Control Board, the National Energy Council, the Watershed and Wetland Management Committee and the Plant Protection Board.

Priorities for the Office of the Director for 2017 – 2018:

- To complete the process of operationalization of the DOE and the SIRF Fund, by end of 2017;
- To restructure the accounting and procurement procedures of the DOE to meet international standards as well as to ensure full accountability, transparency and fairness/equal opportunity;
- To prepare and submit for approval 100M USD in project proposals for Antigua and Barbuda as well as the OECS;
- To achieve a DOE structure that will move away from the normal hierarchical structures to an approach that will seek the full utilization of the staff while ensuring that, when staff are absent, that the remaining staff of the department can still function reasonably well. This will also allow for cross fertilization of expertise and ideas. This approach is critical for a small island with limited human and resources. The saying "not in my job description" is not relevant in the new structure of the DOE.
- Strengthen public awareness and education, networking and functional partnerships with other government agencies;
- The SIRF Fund is fully operational and disbursing funds to its clients.



Figure 1. The Department of Environment's Strategic Plan has set a goal for 2017 — 2018 to prepare and submit for approval at least US \$ 100 million worth of project proposals for Antigua and Barbuda as well as the OECS countries.

Specific Responsibilities as per the EPMA Legislation:

Management and Coordination of Multilateral Environmental Agreements (MEAs) (Director)

- Establishment and convening of the National Coordination Mechanism (NCM) for MEA's.
- Coordinate and manage technical inputs to meetings of MEA's
- Seeking accreditation to the Green Climate Fund
- Developing project applications to the Adaptation Fund

Environment Information Research Education and Training

- o Implementation of the Botanical Gardens Management Plan;
- o Develop a research policy for the DOE and the government;
- Develop a training policy for the DOE and executing agencies;

Review the Botanical Gardens Act;

Detailed notes:

Wildlife Protection and Trade (CITES)

The Department of Environment is the management authority for the trade in endangered species. The department will produce annual reports on the permit issues with respect to this activity.

Invasive Species

Management of invasive species such as lemongrass and the Giant African Snail, and other species such as the Sargassum seaweed, have become a serious environmental issue with significant economic impact. The department will be working on a project to tackle the issues from the perspective of finding sustainable ways to manage these issues.

The floating Sargassum seaweed is brought into the coastal environment in Antigua and Barbuda by global current patterns. It has been depositing in coastal areas over the last several years, in 2015 and 2016 there was an increase in the occurrence of the problem in terms of frequency and amount. In some instances, the amount is so high that it forces temporary closing of beaches and nearby buildings located down wind. In one area the school had to be close due to the smell. The DOE has developed a beach cleaning policy to guide the hoteliers and other coastal property owners in dealing with the issue. Additionally, there are growing complaints from fishermen of damage to fishing gears and death of juveniles species of fish and turtles. In the turtle nesting season, the deposition of seaweed on beaches that serve as nesting areas for turtles has made it difficult for turtles to nest and has led to tremendous dangers for hatchlings returning to the ocean. In one area of the island where turtle nesting was studied for over 20 years, for the first time ever none of the regular females nested in 2016.

The responsibility cleaning the seaweed has been placed with the Department of Environment, Natural Ecosystem and Biodiversity Management(NEBM) Unit and the cost of cleaning up is growing. In view of this, the DOE will have to redouble its efforts in cleaning up the seaweed as well as invest some energy into identifying ways of managing the seaweed when it comes on shore to reduce the impacts and economic burden. In this vein the DOE will also be using examining the use of the Sargassum for other purposes.

The priority for this period is for the development of research protocols for protected species for fauna and for the Botanical Gardens for flora.

Multilateral Environmental Agreements (MEAs)

In 2016-2017 the department will seek to improve its overall management and coordination of Multilateral Environmental Agreement (MEA) involvement. Key to this will be the establishment and convening of the National Coordination Mechanism (NCM) for MEA's. The NCM will also be responsible for the settlement of any environment related disputes and will advise cabinet on any international environmental agreements or any disputes that need to be settled. It was the intention of the DOE to convene the NCM in 2016. Unfortunately due to staff shortages the NCM was postponed until 2017.

The Department of Environment serves as National Focal Point for all multilateral environmental agreements. As such the director will continue to coordinate and manage the technical inputs to meetings of MEAs. To this end, the director has been designated as the Ambassador for Climate Change. From 2016-2018 the director is a member of the Green Climate Fund Board (in a variety of capacities) as well as a Member of the Standing Committee on Finance.

In order to improve its ability to access international funding the department will be seeking accreditation to the Green Climate Fund during this period. This process will enable the department to increase tenfold is ability to access concessional environmental financing. The department has been successful in its bid to become National Implementation Agency for the Adaptation Fund, to this end the department has submitted an application for a project valued at 10M. This project was originally submitted in 2016, but was not completed, therefore it will be resubmitted in January 2017.

Environmental Education, Public Awareness and Research

One of the major roles of the Department of Environment is to raise the nation's awareness about the state of the environment in Antigua and Barbuda. The fact that Antigua and Barbuda relies on its natural resources for economic sustenance makes the proper management of these finite resources even more necessary and urgent. In 2017-2018 the department will develop/revise and implement the Communications Strategy; including dedicated activities for the management of the Victoria Park Botanical Gardens.

The Ecozone Summer Camp will also be convened in 2017 after a several years hiatus. The Botanical Gardens is being developed to host the camp. The camp will be for children whose parents are from the civil service and who find it difficult to pay for a safe place for their children to go during summer. These children will in turn influence their parents as they learn about the environment around them.

Due to the scarcity of resources, it is the philosophy of the department to design public awareness exercises that send a message to the general public while accomplishing tangible benefits on the ground. To this end, the department has devised several visible and relevant programs that communicate environmnetal messages to the public. The DOE will continue with this approach.

The program for 2017 - 2018 will include activities on World Environment Day (June 5) and Arbour Month (November) in line with the Comunications Strategy.

The Communications Strategy of the DOE documents the use of the Victoria Park Botanical Gardens as a space for education and awareness. The DOE will be designing and establishing hotspots of environmental education within the Botanical Gardens. The Communication Strategy anticipates a permanent exhibit of the various MEA Conventions and projects including national outputs. This exhibit will be within the Victoria Park Botanical Gardens, which will be enhanced to facilitate improved access and displays of green technology, exhibition stalls of projects and environmental issues.

The priority area for 2017 is getting the Victoria Park Botanical Gardens prepared for visitors through the construction of two bathrooms and additional office space for meetings and confrences.

Natural Ecosystem and Biodiversity Management (NEBM) Unit







Figure 2. Protecting and promoting Antigua and Barbuda's Biodiversity

RESPONSIBLE OFFICER: RULETA CAMACHO THOMAS, DEPUTY DIRECTOR

The office of the Natural Ecosystem and Biodiversity Management (NEBM) Unit will work closely with the director and will have significant overlaps. The deputy director has responsibility in the following areas: development of technical policies and plans, the Forestry Unit, protected areas, watersheds and wetlands. The deputy director, also has its own distinct responsibilities executed by a team that consists of full time, part-time staff and short-termed consultants. The deputy director will also manage and staff the operations of the Wetland and Watershed Management Committee. This office is also responsible for being the secretariat of the Technical Advisory Committee (TAC).

Priorities for 2017 -2018:

- Assess and making recommendations for managing environment-related risks to development and risks to the environment from proposed development.
- Directing and managing of the Environmental Impact Assessment process
- Completion of the Environmental Policy Framework¹ as stipulated within the EPMA (2015) and the accompanying National Environmental Management Strategy (NEMS);
- Preparation of a detailed work plan for the development of the policies and plans outlined within the EPMA 2015 with timelines for completion (2017 operational plan)
- The National Policy for the Reduction of GHGs (2017);
- Establishment of the Wetlands Management Committee and to develop ToRs, and operational procedures with the first two meetings being held in 2017.

¹ EPMA, 2015, Part IV, Section 19 (1)(2)(3)

- Completion of the policies for the system of protected areas (2018); update of the existing Protected Areas System Plan from 2010.
- Negotiations for the management of the protected areas as per Part VII section 53 of the EPMA 2015; and development of management plans for all Protected Areas under management with accompanying regulations;
- The demarcation and survey of 20% of the wetlands, watersheds and other lands for the purposes of flood reduction, wind turbines, carbon sinks and other climate ecosystembased functions.
- Update of Schedule 8 of the EPMA 2015 which lists protected species under legislation inclusive of marine creatures, arthropods, etc.,
- Development and completion of species management plans for the endangered bats, bees and other species in Schedule 8 of the EPMA 2015
- Develop and publish material for public awareness and education to include protected areas, protected species, critical watersheds and important wetlands into the curriculum of the Ministry of Education. (Ongoing)

Specific responsibilities as per the Legislation

Environmental Plans and Policies

- Revise the National Environmental Management Strategy, which will serve as the National Environmental Policy Framework.
- Development of additional elements of the National Environmental Policy Framework
 - Antigua and Barbuda's Climate Change Policy to include the Paris Agreement and its accompanying regulations, the NDC, the 4NC, the BUR and the CBIT;
 - Further development of the National Coastal Zone and Setbacks Policy and to make way for its approval.
 - Development of local area development plans for watersheds
 - Management of protected areas
- Regulations to give effect to the same.

Natural Resources, Wetlands, Watersheds, Protected Areas and Wildlife Management

- Establishment of the Watershed and Wetlands Management Committee, their TORs and operational procedures
 - Establishment of sub-watershed boundaries and mapping and categorization of 50% of all hydrological features in Antigua and Barbuda
 - Establishment of setbacks for categories of hydrological features.
 - Development of at least two (2) Local Area Development Plans for the review and approval of the committee in conjunction DCA
- Official approval and implementation of the National Biodiversity Strategy and Action Plan (NBSAP)
- Management of the CITIES related issues including the production of the relevant reports.
- Management of invasive species such as the Sargassum Seaweed and the Giant African Snail in conjunction with the Plant Protection Unit.
- Development and implementation of the Adaptation Fund project for the McKinnon's Watershed;
- Development and implementation of the National Adaptation Planning project for the GCF;
- Issue protection orders that can give assurances to the protection of private lands in watershed, waterways and wetlands;
- Tree planting program for 90K trees/year.

More detailed notes:

The Department of Environment will revise and update the National Environmental Management Strategy (NEMS) to cover the period 2017 – 2020. Under the EPMA (2015) section (IV) this action is referred to as the preparation of a "National Environmental Policy Framework". In light of the developments in international policy related to sustainable environmental management, the NEMS will need to include new elements such as the 2015 development goals, the Climate Change Paris Agreement as well as the new internal policies on finance for sustainable development, biodiversity and desertification. The department will also address the issue of wellness areas and terrestrial protected areas. The National Policy framework will be used to guide the DOE in its assessment of planning applications and the Environmental Impact Assessment Process.

The document will include:

- A description of the environment;
- An analysis of environmental issues of national significance and strategies to address these;
- The obligations of Antigua and Barbuda in relation to the international environmental agreements to which the country is a party will be described, their relevance will be explained and the mechanisms that will be employed to implement their requirements will be outlined. National policies and plans will need to be developed for each area of responsibility². The policies to be developed in this period include:
 - Antigua and Barbuda's Climate Change Policy including Greenhouse Gas (GHG) reduction, adaptation and climate change in general.
 - A national coastal zone and setbacks policy.
 - o Local area development plans for watersheds inclusive of wetland areas.
- A number of policies have already been developed and will be included in the NEMS, these are policy documents on biodiversity, desertification, biosafety and sustainable island resource management zoning plan.

Priorities for reporting to the convention for this period is the nationally determined contribution for the Paris Agreement, has to be submitted to the UNFCCC by 2018. Work on this should therefore commence in 2017. Further work on the Capacity Building Initiative for Transparency, fulfilling reporting obligations under article 13 of the Paris Agreement has already commenced and a project for the Capacity Building Initiative on Transparency will be will be completed by 2018. The National Adaptation Plan (NAPs) will begin in 2017 and completed in 2018.

This Strategic Plan will have to be revised with the completion of NEMS.

² Section 19 of the EPMA

DOE Operations Unit



"...efforts will be supported by a number of Public Financial Management (PFM) related initiatives to include internal audit of the Treasury and major spending ministries; improving the procurement framework with the assistance of the Commonwealth Secretariat, and, with some assistance from the IMF's Fiscal Affairs Department, reorganizing the Treasury to improve overall operational and cash management processes."

- Prime Minister Gaston Browne, Budget Speech 2017

RESPONSIBLE OFFICER: HELENA JEFFERY BROWN, ACTING CHIEF OPERATIONS OFFICER

The DOE Operations Unit consists of accounting and finance, security, asset management, procurement and human resource management units. This office also acts as the Secretariat of the Audit Committee.

Functions of the Operations Unit

- Further establishment of office policies and protocols and operational procedures to implement each area of the DOE related to operations.
- Building institutional capacity of the DOE to effectively implement the act;
- To develop the standards for the DOE that meet international fiduciary requirements.
- Develop a training and personal development policy for all staff;
- Ensure that all sites under the responsibility of the DOE have adequate protection and security for its staff and assets; etc.

Administration

In 2017- 2018 the Department of Environment will seek to commence the effective implementation of the EPMA 2015. The department will establish office protocols and procedures to implement each section of the act and to transition to a department. The EPMA hasfive (5):

- To further develop and establish the legal regime for sustainable environmental protection and management in Antigua and Barbuda,
- To establish effective administrative mechanisms for environmental impact assessments, pollution control, natural resource management, biodiversity conservation and public participation, and
- To implement multilateral environmental agreements to which Antigua and Barbuda is a party and for related matters.
- To develop the SIRF Fund and execute its fund raising strategy
- To build a department that will attract the best staff. And to further care and mould staff
 to meet their full potential without any discrimination and bias to any gender, special
 needs, or special circumstances.

In order to implement these, the department will need to continue to build institutional capacity to implement the act and relevant policies. This will include the hiring, upgrading and reclassification of staff as well as on-going professional development training and evaluations. These improvements will assist the department in the transition to a department mode of funcitioning. More responsibility and authority will be assigned to the officers as well as an increased measure of accountability. Officers will be trained in the collection of evidence and samples that could lead to prosecution of individuals and companies. Officers will aslo be trained to issue prohibitive notices, permits for pollution and fines. Officers will need to be trained in the area of understanding their impact of fiduciary standards.

The department will also need to expand its capacity to accommodate its staff. This will be done through the refurbishment of the two storey buildings in the Victoria Park Botanical Gardens and building structures only on areas of the park where existing building footprints are located. The new and refurbished structure will be constructed to the highest standards of energy effeciency and will be in keeping with the natural environment of the Vitoria Park Botanical Gardens.

The DOE will also have to provide office space for the MEPA Trust. To this end, the buildings within the Botanical Gardens will be refurbished to accommodate the MEPA Trust.

The department will have to prioritize the development of regulations for all sections of the EPMA. The priority in this area is the Paris Agreement regulations, regulations for the SIRF Fund and the Adaptation Fund and SCCF projects.

Operations – Financial Management, Procurement

and Accountability

The DOE seeks to manage the finances of the government and donors with the highest level of fiduciary standards. The DOE has a zero tolerance for any financing and other wrong doing. The

DOE is aware that many controls can be breached simply by not knowing the procedures and therefore take great care and time to bring to the attention of the staff, consultants and decisions makers the operational procedures of the DOE. These procedures are documented in various manuals and procedures and can be found on the DOE web site or can be accessed by a simple email to the Knowledge Management expert.

In 2015, the minister approved a Code of Conduct, and all staff members must sign to indicate that they have read this or have had it read to them. The staff repeats this exercise every year in January. **Staff retreats are arranged twice per year; January and July.** These meetings provide refreshers to the technical and administrative staff of the important procedures of the DOE and their relevance. These retreats will soon be extended to the staff members of executing agencies.

In 2016 – 2018, the DOE will be seeking accreditation to the Green Climate Fund for basic fiduciary standard and project management and will upgrade its operational procedures to reflect this desire. To accomplish this, the DOE will be upgrading its accounting procedures and operationalizing the SIRF Fund. The DOE will also be providing training, equipment and other capacity building efforts to the DCA, Public Works Survey Unit and the Ministry of Health. The purpose is that these departments will adopt the standards of the DOE and therefore be able to execute projects funded by the GCF.

Environmental Quality and Control Unit







Figure 3. Pollution is a "silent" threat – it often goes under the radar, until it manifests in high profile events.

RESPONSIBLE OFFICER: VACANT, ENVIRONMENTAL QUALITY ASSESSMENT OFFICER

Pollution control falls under the areas of Act for Pollution, and Environmental Management System (EMS). This post is currently vacant. The vision for this post is still being developed and will be finalized after the regulations have been completed.

General Priorities:

- 1. Identification of TORS for this post and advertise with the intention of recruiting the individual in latter half of 2017;
- 2. Completion of the regulations and have them gazetted;
- 3. Ensure that the compliance and SIRF fund is up and running on time;
- 4. Develop complementary tax compliance for this area;
- 5. Adopt national standards for ISO 14001 Environmental Management Systems (EMS)

Specific Responsibilities as per the Legislation

Pollution Control

- Implementation of enabling activities for Pollution Management (i.e. water, soil and indoor/outdoor air quality standards and monitoring)
- Establishment of the Environment Registry and populate the pollution section;

- o Development of standards for the Environmental Code of Practice;
- Draft and pass regulations;
- Develop transparency policies for the right to know where there are pollutants;
- Environment registry with pollution information is stored in a database that is added to the EIMAS and supports the creation of relevant maps.
- To control the emission of GHGs as part of the Paris Agreement. To this end the DOE will install 7 MW of RE in the off-grid sector 2017.

Environmental Management and Monitoring

This is the most critical area for the mainstreaming of environmental laws and good practices within the other sectors of the government.

- Work with the Bureau of Standards to adopt relevant ISO 14001 EMS standards
- Development of guidelines for the implementation of Environmental Management Systems and Environmental Management Plans for commercial and industrial facilities.
- Development of standards for the environmental code of practice;
- Develop the EMS for the hospital and the National Parks with funding from the GCF readiness project;
- Provide training for DOE and other staff for the unit.

Monitoring, Evaluation and Data Management Unit





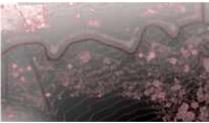


Figure 4. Data collection for monitoring and evaluation is key to tracking impact, scientific research, communicating results, and reporting

RESPONSIBLE OFFICER: JASON WILLIAMS, DATA MANAGER

The DOE is expected to provide a monitoring and evaluation plan for the implementation of its Strategic Plan. The data manager will provide the necessary indicators to each unit of the DOE to facilitate monitoring. The monitoring and evaluation process and schedule will be managed by the Data Management Unit and the office of the director. The M&E will be executed via periodic internal (staff) and external (relevant agencies) technical evaluations and independently reviewed by consultants.

The M&E responsibilities of the data manager does not include financial or HR evaluations. The data manager is however expected to participate in all evaluations.

Priorities for 2017 - 2018

- Develop a costed monitoring and evaluation plan for the entire period;
- Individual monitoring and evaluation plans for each project and program;
- Develop and approve the M&E section for each project proposal being developed.
- Operationalize the Environmental Information Management and Advisory System (EIMAS)

Specific Responsibilities as per the Legislation

Part IX: Environmental Information

- Establishment of the data and information management systems (EIMAS) and GIS
 Unit:
- Development of special data infrastructure and protocols for the management of data and information
- Maintain a natural resources inventory
- Establish and populate the environment registry
- o Develop the first State of the Environment Report
- o Provide material for public awareness strategy and education campaign.

Detail notes:

One of the major challenges for the environmental management is the lack of data. Without adequate information, it is not possible to enforce environmental legislation, conduct Environmental Impact Assessments, alert the government about the depletion of natural resources and report on obligations. To date, the information available to government technicians is inadequate for decision-making. Information required to ensure that this system is fully functional includes, but is not limited to:

- Hydrologicaland drainage pattern data
- Water quality data
- Coastal erosion and dynamics data
- Energy usage by sector both on and off grid electricity and transportation
- Ecosystem data
- Biodiversity data
- Protected areas data
- Environmental health data

In order to resolve these issues the department will continue to build the Enviornmental Information Management and Advisory System (EIMAS). Geographic Information Systems (GIS) Unit will be established. The GIS Unit will be responsible for keeping a National Resources Inventory, liaising with the public, businesses and non-governmental organizations, and to collect, store, manage and disseminate information. The department will develop spatial data infrastructure and protocols for the management of data and information. These standards will

help to ensure that data and information is available for decision making at all levels including, where appropriate, to the general public.

As a part of the GIS Unit's work program a Natural Resources Inventory will be developed and presented on an online platform for public access, consultation during environmental impact assessments, and other uses for a fee³. The GIS Unit will also be responsible for providing the data for the preparation of a State of the Environment Report within three months of the closing of the calendar year, on a biennial basis. The unit will provide the data on the state of the environment, relevant activities and report the effectiveness of implementation.

The purpose of the environment registry is to administer information on the environment, and to provide assistance to the department in the monitoring, compliance, reporting and notification requirements under MEAs to which Antigua and Barbuda is a party. The legislation provides for public access to the registry.

³ In accordance with Section 16(a) of the Freedom of Information Act.

Project Management Unit

RESPONSIBLE OFFICER: VACANT, PROJECT MANAGER

Notes: (This will be a contract post that will be filled when the DOE has a large enough portfolio of projects to fill this post. In the interim Diann Black-Layne and Lia Nicholson will work on this).

The Department of Environment is the national focal point for a number of Multilateral Environmental Agreements (MEAs) and serves as the government's National Executing Agency (NEA) for a number of projects aimed at realizing national compliance to the MEAs and attaining sustainable development. These projects are designed to meet national priorities as well as to ensure that Antigua and Barbuda honours its commitments under the various MEAs. The NEA is responsible for the overall management and supervision of the aforementioned projects, ensuring that there is harmony between all project activities in areas such as public awareness, training, data sharing, and general national environmental policy and priorities.

The priority area for 2017 – 2018 is the development of projects for the GCF, AF and the replenishment of the GEF. The DOE is currently working on projects valued at 35 Million USD and will begin further negotiations for an additional project valued over 35M USD from the GCF.

This is one of the areas that is cross cutting to the DOE and which does not have any basis within the EPMA (2015). Currently this unit is being managed by the director with assistance from other staff. The intention is that, as the number projects increases, a permanent Project Manager will be hired to coordinate across all projects. The current situation has a part-time Project Manager.

The list of projects under management and the management structure are in the Annex below.

Priorities for 2017 – 2018

With the accreditation of the GCF and the AF, the Project Management Unit (PMU) is expect to grow exponentially to facilitate project implementation;

- Hire a project management specialist for the PMU as a permanent post (towards the end of 2017 or early 2018);
- Hire two project management officers in permanent posts (one in 2017 and in 2018);
- Procurement Officer, permanent post to be filled in 2017;
- Finalize and approve the Technical Manual of the DOE (late 2017);

- Finalized and approve Procurement Manual (1st quarter of 2017);
- Finalize the payment of statutory deductions to project staff (1st quarter 2017);
- Hiring, supervision and evaluation of project contract staff.

Detailed Notes

PROJECT MANAGEMENT UNIT (PMU)

The PMU is a project implementation arm of the department consisting of technical and administrative personnel. This PMU assists the DOE in meeting its obligations on projects implemented by the department by allowing for flexibility of staffing not normally applied within the wider government service. The PMU is staffed by consultants and ad-hoc staff from various departments of government, and the private sector. The PMU is a permanent part of the DOE and used when there is a need to procure the following services:

- Full time project coordinators. The project coordinator may be hired to work on one project funded by several sources;
- Part-time project or technical coordinators seconded from within the government service and paid a stipend to work on the project;
- Technical coordinators, full time and/or part-time;
- Technical Coordinators seconded to the project without additional pay;
- Part-time and full-time consultants;

The PMU is designed to achieve efficiency and coordination in the management of many projects from a variety of donors, as well as the governments' projects. The PMU also ensures that there is effective coordination and efficiency when there are project activities that are similar and interdependent on each for execution. Antigua and Barbuda is a SIDS and access to adequate technical capacity and expertise is one of the areas of risk to the department. The PMU is one mitigation measure to minimize this and other risks.

Cross-cutting functions and ad hoc mandate:

From time to time, the government may request the DOE to provide assistance in other areas not necessarily under the EPMA. The DOE will seek to provide this assistance in a professional and timely manner. The Director will report on these activities as part of its quarterly and annual

reports. This section includes representation of the DOE on cross sectorial committees, the GEF Small Grants Program committee, the MEPA Trust and the MANA Program.

Compliance and Access to Justice Unit

RESPONSIBLE OFFICER: VACANT, CHIEF OF ENVIRONMENTAL LAW

Compliance and enforcement is an essential area underpinning the EPMA. There will be persons and entities who could break the laws both natural and man-made, and for this the DOE seeks to have a robust system of compliance that relies on extensive education, public awareness and soft enforcement. Where this fails the DOE will have the capacity to ensure that the proponent is met with the full force of the law.

This unit shall serve as the secretariat for the Appeals Committee that will serve the minister.

Priorities for 2017 – 2018

- Develop regulations for the EPMA, prioritizing the Paris Agreement Regulations;
- Develop a Compliance and Enforcement Policy for the DOE;
- Develop guidelines for public comment and procedures per the EPMA and ensure that these are observed
- Support the legal functioning of the SIRF Fund
- Identification and training of staff in compliance;
- Audit and revise the functioning of the internal and external complaints mechanisms;
- Support the Principle 10 (P10) process on access to justice in environmental issues.

SPECIFIC RESPONSIBILITIES AS PER THE LEGISLATION

Part XII – Compliance and Enforcement

Draft and submit written notices of violations under the EPMA, as well as administrative orders where applicable.

Part XIII - Offences and Penalties

Undertake the legal proceedings for the enforcement of the fees schedule under Schedule XIV of the EPMA, including for *inter alia* pollutant discharge into water resources, the atmosphere, hunting, killing or accidental injury of protected species, and commercial logging.

Part XIV - Miscellaneous

- Assist in the operationalization of the Appeals Committee, including drafting TORs, etc.
- Manage the public comment and procedures process, including publishing notices in the Gazette
- Drafting regulations for the EPMA and updating schedules in the EPMA as required

Sustainable Island Resource Framework Fund (SIRF Fund)







Figure 5. The SIRF Fund will catalyze internal and external funding sources to enable the country to meet its climate and sustainability goals in a coordinated, systematic and cost-effective manner

RESPONSIBLE OFFICER: VACANT, SIRF FUND DIRECTOR

The SIRF Fund is essential due to the following reasons. The financial resources required to meet the estimated annual operational costs of the protected areas system are >\$5 million annually. Government funding for environmental management has been cut for the past 4 years in succession, creating a challenging financial environment. Environment related agencies have to compete with other more pressing national priorities such as health, education, and debt servicing.

Therefore, the solution is to raise, receive and scale up conventional and alternative means to financial self-sufficiency for environmental management included protected areas, mitigation and adaptation.

The SIRF Fund will work in the following ways:

- Sources of Income:
 - Sale of renewable energy to the public sector, small loans facility, recycling of used oil, sewage services, micro-financing facility and support where possible, payments from the government (debt for climate swaps) and grants from international agencies.
 - Water levy and other payments for ecosystem services, where possible
- Thematic Funding Windows:
 - Implementation of the Environmental Act with funding to various agencies, adaptation measures, resilience building and protected areas management, and

capital projects from government agencies and NGO's that are related to the implementation of the EPMA (2015).

During this period the department will continue to elaborate the SIRF Fund's operational procedures, develop its business model and revise and implement a fund raising strategy to ensure the sustainability of the SIRF Fund. The department has already sourced over 10M in funding for the SIRF Fund and will continue its efforts to generate grant and concessionary financing for the sustainable operation of the fund. During this period several projects will test the operational modalities of the fund as part of the monitoring and evaluation of the fund's performance.

2016 Year in Review

The summary of the outputs for 2016 is provided in Annex 1. During the first half of the year, the DOE was short staff at the senior staff level. At one point all three senior staff, the Director of Operations, Deputy Director and Data Manager were out of office for extended and in some cases frequent intermittent periods of time. During this period, the Data Manager returned after one year, in March 2016, and this provided a much needed boost to the DOE. The Deputy Director was frequently out of office on certified medical leave.

In the second half of the year, the Deputy Director went on maternity leave/holidays from the end of May to December 2016. The Data Manager and the Director of Operations were in place during that period and the DOE began the work of catch up. Short—term mitigation measures taken to assume the duties of officers who were on leave during this time were the shifting of responsibilities to other staff, and the use of consultants. By the closing of the year 2016, the DOE increased its entry level technical staff by over 50% (3 additional persons) and will seek to add 6 additional professional staff, both permanent and long-term consultants, in 2017.

Based on the lessons learnt with the current structure of the senior staff and the current vulnerability of the DOE in this area, changes to this structure will be made during 2017. In general the DOE met over 50% of the targets for 2015 – 2016. In addition to targets set by the DOE, there were several additional mandates and targets added to the work program of the DOE during this period. These were normally provided via cabinet decisions and natural ad hoc circumstaces such as the seaweed clean up program. The reasons for delays in meeting set targets were due mainly to shortages of staff and the slow disbursement of finances from donor agencies and from the Treasury.

General comments from the ministry and the minister about the performance of the department is that there is a need for the following:

- More public awareness,
- Continued staff professional development,
- Improvements made in timing of outputs,
- Improvements made in the scheduling of travel,
- Further refinement of accounting procedures and training in corperate governance.

The Project Management Committee (PMC) will conduct independent technical evaluations of the work of the DOE with an aim to inform the rationalization of the organizational structure. The goal is to assit the DOE to plan its workprogram for the next three years and reduce vulnerability to staffing and financial impacts.

Strategic Plan – Summary of Achievements 2016 and Goals for 2017

2016 was a busy and productive year. The DOE along with the ministry we able to achieve the following outputs:

- 1. Historic ban on plastic bags within Antigua and Barbuda
- 2. The visit of His Royal Highness Prince Harry for the Queens Canopy Project
- 3. Ratification of the Paris Agreement
- 4. Review of over 24 applications for EIAs processed
- 5. Prepared over 60M dollars in project proposals to various funds
- 6. Received approval for over 16M USD
- 7. Began implementation of 3 new projects
- 8. Completed implementation of 2 projects
- 9. Became member of the Green Climate Fund Board
- 10. Negotiations for Climate change
- 11. Initiate the construction of interpretation center for the protected areas system
- 12. First project for electric vehicle approved
- 13. Paris Agreement Regulations drafted and under consultation
- 14. McKinnon's sewage treatment plan operational
- 15. Hazard report for the Northwest Coast completed
- 16. GCF accreditation initiated and will be completed in 2017
- 17. DOE selected to host the Commonwealth Climate Finance Expert for the OECS region
- 18. The Minister and the DOE selected to lead climate finance for the OECS
- 19. Over 20K Trees planted by the nursery Staff

ANNEX 1: Summary of Achievements 2016

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
Coastal Zone Protection	Coastal restoration plans for west coast of Antigua.	Funding proposal is in first draft	The plans will be developed in 2017 with funding from the GCF.
	Sargassum management of beaches. Beaches were closed only once during the year. This is a great accomplishment.	Beaches being cleaned	Keeping beaches clean.
Integrated wastewater management (IWCAM)	Commissioning of the new sewage treatment plant. Move and establish prison	There have been some technical delays due to maintenance issues with the control panel for the plant. The situation will	Commissioning of the plant and the supply of water to the prison farm.
	farm on the site of the sewage treatment plant.	soon be resolved and the plant should be commissioned by end of	Installation of return pipes. Initiation of IWeco
		2015.	project.
		Pipelines need to be installed to enable treated water to go back to the hotel.	Connecting First Choice and Antigua Village.
		The area for the relocation of the prison farm has been fenced and the buildings have been relocated.	Establish the tariff system for the SIRF Fund.
		Pressure testing at the waste-water treatment	

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
		plant was completed in 2016.	
Accreditation as national implementati on entity for the Adaptation Fund and the Green Climate Fund (GCF)	Ten million dollars in projects approved. The final approval is expected in March 2017.	Accreditation achieved. The DOE submitted its application for accreditation to the GCF in November 2016	Finalize Accreditation to the GCF in June 2017.
Biodiversity	Completion of NBSAP and 5 th National Report Nagoya Protocol	NBSAP final draft completed and submitted to the minister for signature. Legislation passed.	Monitoring and implementation of the NBSAP. Submit new projects for GEF6 & 7. Update Schedule VIII. Development of ABS regulations to make Part VIII of the EPMA operational. Complete "Path to 2020" project document. Deliver Management Plan for PA (MONP)
Climate Change	Ratification of the Paris Agreement!!	TNC completed and submitted.	Revision and further Development of the INDC's.

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
	All reports to the Climate Change Convention being submitted. First draft of the Paris Agreement Regulations.	Draft National Climate Change Policy delivered. Draft Paris Agreement Regulations delivered BUR application drafted.	Submit Biennial Update Report (BUR) application for funding with UNEP to the GEF. Begin proposal development for the Fourth National Communication.
	Adaptation and V&A assessments for GCCA and REGATTA (CaribSave). Completion of studies on the development plans for the north west coast of Antigua.	Documents completed and available. Drainage clearing done in Cashew Hill. Technical drawings delivered for intervention & bid advertised for construction work.	Requests to CaribSave for further assistance with climate change policy. Physical drainage (construction) work conducted in Cashew Hill.
	5M project for SCCF is finally on the way.	Project launch completed in December 2016 and first disbursement received. Will generate the first electric cars for the DOE. First funding for revolving funds.	Project Implementation: Revise the building code. Develop local area plans. Disburse loans for adaptation through the Revolving Fund.
	Engagement with the Green Climate Fund (GCF):	Readiness proposal implemented, support provided to the Internal Audit Unit in Finance.	Lead the development of an Enhanced Direct Access Project with the OECS Commission,

Program	Planned Outcomes for	Current Status	Action required in 2017
SPPARE/IREN A project	Antigua and Barbuda's first GCF Readiness proposal a first for the Caribbean region. Developed a 20M project for the GCF. IRENA concessional loan approved. Purchased of over 8MW of wind and solar technology. Construction will begin in 2017. Establishment of the SIRF Fund and the negotiation of 10M USD of technologies for the fund (2013 – 2015)	A&B's Country Program to guide GCF investments has been developed. The DOE has submitted its Second Readiness proposal to the GCF. Contract signed with a consultant to develop a GCF project with UNEP. Project is being implemented and PC hired. RFPs advertised SIRF Fund Operational Manuals developed MONP management plan being developed MANA program started	Grenada and Dominica as a pilot, and submit to the GCF. Develop and submit the GCF project with UNEP to the GCF. - Completion of MONP management plan - Increase Antigua's carbon sink - Installation of wind and solar power RE plants - Update plans for interpretation center and implementation
	Commencement of the interpretation center for the protected areas of Antigua and Barbuda.		
ЕРМА	Enforce and implement EPMA;	Legislation passed - draft regulations for pollution control developed	Development of regulations and institutional arrangements for

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
		 Draft National Environmental Management Strategy draft National CC policy developed Draft Coastal Development Setback guidelines Draft Coastal Zone Policy developed Environmental Management Systems (EMS) are being adopted by the Bureau of Standards 	Implementation of the Act. Update and implement environmental standards. Drafting of Environmental Policy Framework. Further refinement of the Coastal Development Policy documents. Stakeholder engagement.
			Pilot EMS in the Mt. St. John's Hospital (letter of support received)
OECS GCCA	Cashew Hill Demonstration Project	Comprehensive Hydrological Assessment and Drainage Design recommendations developed.	Funding to be sorted.
	Policy Documents	Drains cleared and survey of waterway conducted. Draft National Climate Change Strategy and Adaptation Action Plan.	Completion of policy documents adoption of action plans and implementation.

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
		Draft National Environmental Management Strategy.	
	National Policy Dialogues Local Area Plans for Cashew Hill National Coordination of the GCCA project	Draft pollution regulations produced and DOE staff received training in drafting regulations. National Policy dialogues on Climate Change, Pollution and NEMS held.	Stakeholder consultations planned for January Plan to be developed by June 2017. Continue coordination activities.
		Consultant engaged.	
		3 staff from the MoA in Trinidad receiving GIS training.	
		Land cover, land capability and land use plan development guidelines produced.	
		Consultant engaged to revise OECS building code.	

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
CREW	Fund Project (Caribbean Challenge), and the CREW project (sewage trust fund at the IDB).	The Caribbean Challenge project continues to be a difficulty. We will continue as an observer.	Continue as an observer. Project finished.
Project Management and Administratio	Finalize list of beach cleaners and have contracts prepared and signed	Actions for 2016 completed	On going
n	Finalize CN for staffing arrangements, these will include possible secondment.	This CN was prepared and submitted to the cabinet. The queries on this have yet to be determined.	Determine the query and resubmit the CN.
	All project financial and technical reports submitted.	Project reports submitted.	Submit quarterly and monthly technical and financial reports.
Global Environment Facility (GEF)	GEF CCCD project document developed and being implemented	PPG phase being implemented; International consultant hired to draft project document.	Project document to be developed, consultations in March, and project submitted to the GEF in April 2017
	2. GEF 6 "Path to 2020" project document developed and implemented	PPG phase being implemented; International consultant (IC) TOR has been advertised; log frame being revised; IC should be hired in December	Collaboration with IC and project document delivered
	Invasive Species (regional project)	PIF completed	Project implementation

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
	CBIT project accepted and will be implemented in 2017.	PIF is to be completed in December 2016	PPG Phase to be implemented
	5. POPS (regional project)	Project inception workshop in January (T&T); Project management team hired; consultancies being advertised to assist countries to implement NIPs (CARPHA won); PCB conducted in Antigua; NIP inception workshop in November; Local experts being identified for POPS inventory	Data collection for NIP and continued testing; Public Awareness implemented for POPs
	6.		Biodiversity projects to be developed and submitted National financial assessment for Biodiversity
Meetings and conferences	Attend the Climate Change, GEF and other meetings	We attend important meetings with funding from international entities. At these meeting officers look for fund raising opportunities. The meetings in 2016 yielded project funds,	Officers will be assigned to attend important funded meetings. Funding opportunities explored at every meeting attended. All report should be submitted 3 days after

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
		training of staff and continued negotiations.	meeting using the new reporting format.
Development Control	Applications and environmental complaints receive documented, consistent, and timely reviews using Policy Framework as guidance.	24 Plans processed 20 recommended for approval 2 recommended for further refinement TOR's for Environmental Impact Assessments (EIA's) issued received and reviewed	Applications and environmental complaints receive documented, consistent, and timely reviews using Policy Framework as guidance.
		2 projects recommended for no approval. Development Guidelines produced to assist	Establishment of the Environment and Social Management and gender Review committee (purpose to review Gender and ESM actions plans
		investors in understanding the process	submitted to the DOE in its capacity as an NDA).
		Presentations made to the Development and Control Authority (DCA) and Citizenship by Investment (CIP) staff and board on the Sustainable Island Resource Management Zoning Plan (SIRMZP)	
		National Environmental Management Systems Committee to be established	

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
Public Awareness Campaign	Implement the communication strategy for projects.	Development of the strategy was completed in 2013. The Botanical Gardens is a part of the Communication Strategy. This was delayed significantly so implementation would begin in 2014	Implement activities as per the communications strategy for Projects
	Conducted awareness and communications activities as necessary.	Celebrated World Environment Day through the launch of national programs to include the Plastic Bag Ban, the 90,000 tree planting project and the bike racks. Arbour Month included a workshop with Agriculture Science students, tree plantings at schools and at the MONP with farmers. It also included coordinated media appearances, plant specific newspaper articles, educational "Tree of the Day" videos on Good Morning Antigua Barbuda, and daily social media posts. The educational month culminated with the	Continue to use WED as a platform for celebrating the successes of the DoE. Expand the Arbour Day Plant Fair to include Climate Fest as a means of sharing local environmental projects and their successes with an engaged public. Improve upon the "Tree of the Day" video. Transplant some of the activities to Barbuda. Develop visual identity Populate and make user friendly CHM website. Host at least 3 "environment day celebrations" based on

Program	Planned 2016	Outcomes	for	Current Status	Action required in 2017
				approximately 5,000 plants through the Arbour Day Plant Fair, and demonstrations of environmental activities throughout Antigua and Barbuda. Drafted articles and coordinated media appearances based on programs within the DoE and their implementation.	work program including Arbor month. Aim to publish 3 environmentally related articles each month. Ensure that DoE activities are publicized. Hold community and public consultations as needed Update social media weekly Coordinate media
					appearances and article drafting for programs and hot button issues. Develop risk messaging for the DoE.
				Eco Zone Summer Camp has been on hiatus since 2012 due to the lack of funds and human resources. Developed Teachers' Resource Guides and Campers' Booklets	There has been indication that SCCF may be able to finance the camp in 2017. Upgrading of Teachers' Resource Guides and Campers' Booklets provided that funds are available.
	Draft wee	ekly social me	dia	Currently have a consistent following of 1286 with a peak reach of approximately 6,000 persons from individual posts. Posts have covered a wide range of environmental issues	Increase followers by 500. Link posts with additional current activities such as the Parrotfish closed season and the resulting updating of

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
		and projects within the DoE.	the EPMA schedule on protected species.
	Plastic Bag Ban	Launched plastic bag ban over three-day period. Prepared lessons learned video and distributed to relevant partners locally, regionally and internationally. PSA videos were to be included in the suite of public awareness material, however this was limited by finances and have not yet been done.	Research, launch and implement styrofoam ban. Possibly use the PSA budget from the plastic bag ban to prepare PSAs for styrofoam ban.
	Image Management new logo for the DOE.	Coordinated the creation of image material: logos, letterheads, and business cards.	Integration of images into general use. Development of signage for the DOE head office and the VPBG.
	Website development. The DOE receive 50K USD for a new interactive website.	Developed program of work for upgrade of website. Contracted web developer. Begun website mapping.	Complete website upgrade and launch new website.
Training	Development of internal and external training programmes Training provided for staff for career development and for undergraduate studies.	Training in climate change was conducted for administrative staff, along with training in the development of log frames for staff of the Codrington Lagoon.	Coordinate internal training programs: - Security (with Royal Police Force) - Hospitality training

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
	Development of a training plan in renewable energy and energy management for the civil service and the private sector.		 Horticulture and Botanic garden training Coordinate external training programs: EIA process Environmental education teacher training program
10YFP SCP (Sustainable Consumption and Production)	Follow the 10YFP SCP program through webinars and questionnaires	Program is being followed.	Develop SCP and SPP (Sustainable Procurement Policy) for the DoE. Develop Environmental Management Plan for Festivals using SCP and SPP principles.
Data Management	Data Management Unit in place and overseeing the management of environmental information Drone purchased and in used at the DOE.	EIMAS Protocol developed and being implemented UAS Operational Manual developed and being implemented Drone purchased and operational Responding to data requests (maps and data files) Drone missions being conducted GIS & UAS trainings being conducted Responding to surveys, questionnaires and preparations of reports	Update and implement EIMAS protocol Develop a draft State of the Environment report Creating EIMAS Geodatabase Backing up files on a regular basis Development of standardized digital filing system Complete surveys, questionnaires and submit reports as needed. GPS, GIS and EIMAS training

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
		KIMS consultant hired and maintaining the DOE servers Updating environment statistics Updating relevant data layers (biodiversity, ecosystem, cultural, infrastructure, etc. Maintain updated equipment list	Collection and compilation of data on environment statistics Identify and relocate to relevant climateresilient infrastructure to house the DMU
Botanical Gardens Management Plan	The Gardens is part of the Queen's Canopy Project to plant a million of trees worldwide. The government received support from the Queen's Canopy Project and as part of this Prince Harry visited and planted the first tree. Commence implementation of the Management Plan for the Gardens Continue work at the Botanical Gardens office and grounds; Updating the legal arrangements for management of gardens.	Work on the office building was initiated and is almost completed. In 2013 the construction of the building was completed, 20 % of the fence was completed, the gates were completed. The road leading to the office has been paved, and a temporary greenhouse has been constructed. The Gardens have been opened for greater public use through the development of Movies in the Park and Yoga in the Park programs, which began in February. There have been a few financial setbacks however the programs will be revived in 2017.	The road into the gardens, The exhibits, Completion of fencing, Installation of renewable energy technology, Security measures Explore the feasibility for additional building space Relocation of prisoners. Review the current management arrangements and recommend action.

Program	Planned Outcomes for 2016	Current Status	Action required in 2017
MEPA Trust	The DOE established the National trust that provides funding for NGOS and the government for protected areas. (MEPA Trust) Registration as a non- governmental organization	Grant-making manual developed with Blue Earth Candidates	MOU to be signed with the DOE and MEPA Trust Securing funding to issue a Call for Proposals
	Development of procedures and process for running a call for proposals		

Annex 2: Listing and Description of Internationally Funded Projects

Project Name	Accomplishments in 2016
Caribbean Challenge Project (Regional)	This project is designed to establish regional and correspondent national Biodiversity Funds. The project is in its 5th year of implementation. This project will come to an end in 2016.
	MEPA Trust established and received 190K USD for further operationalization. The DOE will be the executing agency for the next two years.

Project Name	Accomplishments in 2016
Third National Communication for the UNFCCC	The Third National Communication (TNC) project aims to prepare the next communication to the UNFCCC. The project is ongoing and on schedule to be completed in December 2015. Completed and submitted in 2016.
Integrated Water, Land and Ecosystem Management (IWEco)	Project preparation activities completed in 2016. Early implementation for 2017. The aim output is the expansion of the sewage treatment plan at McKinnon's.
Sustainable Pathways Protected Areas and Renewable Energy UNEP (SPPARE)	Over 8MW of RE electricity to be established. Procurement and funding negotiations of over 16M was completed in 2016. Only project of its kind in the OECS.
Sustainable Energy for the Eastern Caribbean (SEEC) Program IADB	Provide 1M in RE. See report above.
Energy for Sustainable Development in Caribbean Buildings (ESD)	Project ongoing in 2016. This project stalled and the DOE is still trying to restart. This has 1M of RE for the government.
Building climate-resilience through innovative financing mechanisms for Ecosystem- based Adaptation (Ebba) (SCCF).	Launched in 2016. Will deliver 1M of road with climate adjustments in drains; 1.6M in revolving loan program of the SIRF; The first 2 electric vehicles for the DOE;
GCF Project Building Resilience to Hurricanes and Drought in the Building and Water sectors of Antigua and Barbuda	This project negotiated and signed the consultant to develop the project document for the GCF. Project development in 2017. The staff for this project in the Ministry of Health is being trained within the DOE and will be soon established in the

Project Name Accomplishments in 2016 Ministry headquarters of the Ministry of Health and the Environment. Project details. The Government of Antigua and Barbuda (GoAB) is seeking funding from the Green Climate Fund (GCF) for a four-year program to Building Resilience to Hurricanes, Floods and Droughts in the Building and Water Sectors hereafter referred to as "the Project"). The goal of the Project is to alleviate the impact of Climate Change related Drought, hurricane and Floods on the Building and Water sectors, while further establishing a sustainable financing program for Climate Change adaptation in Antigua and Barbuda. The specific objectives of the Project are: 1. Build the resilience of the Water sector to Climate change by providing 3MW of off-grid RE for desalination and for pumping water across the country (10M grants); 2. Building the resilience of the key government buildings to climate change including off-grid RE electricity. The Buildings are related to the health, education and Emergency (Police building etc.) (10M grant) sectors; 3. To provide low interest loans to the private sector to enable them to build their resilience in Building for homes and offices to Hurricane and droughts while having mitigation co-benefits (20M In reimbursable loans and highly concessional loans).

Project Name	Accomplishments in 2016
	The project will be executed via the Sustainable Island Resource Framework (SIRF) Fund. The SIRF is an innovative financing facility established by the government to program funding from local and international sources for the implementation of all MEAs including climate change. The SIRF Fund established by the Environmental Protection and Management Act (EPMA. 2015) and it is still under development. The fund has received several grants to fully develop the Fund. Until the fund has its own income and therefore staff, the Department of Environment and the Ministry of Finance will be the executors of the fund.
	In the project proposal Writing phase;
Global Climate Change Alliance (GCCA) Project on Climate Change Adaptation (CCA) and Sustainable Land Management (SLM)	Both projects established the draft: - National Climate Policy - National Environmental Policy

Project Name	Accomplishments in 2016	
Persistent Organic Pollutants (POPs) (Regional) – Supporting the Implementation of the GMP of POPs in Latin America and Caribbean States	Negotiations completed in 2016 and implementation to occur in 2017. The country of Antigua and Barbuda, as signatory to the Stockholm Convention on Persistent Organic Pollutants (POPs), has sought to fulfill its obligation through participation in various activities directed by the Conference of Parties. One such activity is the collection of data regarding the occurrence of POPs in environmental, animal and human samples. This project provides an opportunity for the country to develop its infrastructural and human capacity to adequately support the efforts of the Convention to evaluate the effectiveness of measures to reduce the use of POPs.	
Reducing the Risks to Human and Natural Assets Resulting from Climate Change (RRACC) – Coastal Setbacks for Development for Antigua and Barbuda	Main output of this project is the coastal areas plan with new setbacks with Climate change in consideration. The project has secured a project from the OECS' Model Integrated Coastal Zone Management (ICZM) Policy project to review existing literature and develop a coastal management and coastal setbacks policy. The objectives of the project are: - To conduct a comprehensive literature review of policies and plans, as well as national and regional analysis of non-profile related data and information that could also inform the establishment of coastal setbacks, including, but	

Project Name	Accomplishments in 2016
	not limited to, information regarding coastal disaster risk reduction and historic inundation.
	 To analyse the beach monitoring data collected by the Fisheries Department and in conjunction with the latest IPCC AR5 predictions and other relevant data on beach and coastline erosion trends.
	 Based on the analysis provide recommendations for coastal setbacks for development for Antigua and Barbuda.
	 To utilize a collaborative process, including comments from stakeholders, of determining the new setback requirements for Antigua and Barbuda.
	 To digitally map the setbacks so they can be integrated into Antigua and Barbuda's EIMAS (Environment Information Management Advisory System)
	 To analyse the institutional arrangements with respect to the collection and analysis of data regarding coastline erosion trends and management with a view to providing recommendations for the establishment of a more effective system for management of these issues.
	 Provide recommendations for the acquisition of the equipment and technical capacity necessary to implement these recommendations.
	Completed.
Adaptation Fund	10M USD fund approved and final negotiations are underway for a 2017 implementation.

Project Name	Accomplishments in 2016
Intended Nationally Determined Contribution (INDC) to the UNFCCC	Intended nationally determined contributions' (INDCs) is one of the important components of the process towards the UNFCCC's 21st Conference of Parties (COP21) to be held in Paris in December 2015. Most countries are in the process of preparing their INDCs. While the process and format of the INDCs documents are new, the information used to prepare the INDC comes for the national and international documents that have been part of the countries' climate change process. Antigua & Barbuda is in the process of preparing its INDC.
Biennial update reports (BURs) to the UNFCCC	Project initiated in 2016. This will established the greenhouse gas emission standards and procedures for the Act.
International Renewable Energy Agency (IRENA)	The IRENA concessional funding granted and accepted in January 2016. Since then the procurement has begun and will be completed in January 2017. (This is for the 8MW RE as mentioned above).
GEF 6 Projects	The GEF 6 negotiated in 2016 for 4M USD.
	The project portfolio will consist of one regional project and three national project. The national projects will be consistent with biodiversity goals and implementation of PA systems, renewable energy program, environmental information management and the regional project will be related to invasive species.
	Regional project is to be implemented and the national projects are in varying stages of implementation, i.e. PPG phase and project concept development.

Project Name	Accomplishments in 2016	
	Regional project – Invasive Alien Species (1.4M)	
	National Projects –	
	 Capacity Building Initiative for Transparency (CBIT) Path to 2020 (2.6M) Cross Cutting Capacity Development (CCCD) (800K) 	
GEF Capacity Building project	Capacity building for the implementation of the newly passed environmental legislation. The areas of focus are the environmental monitoring and pollution management. Implemented by UNDP and project document preparation on the way.	
Electric Vehicle Project	Development of project document and approval for 650K USD for electric school buses and a project document for submission to the GCF.	