

**ANTIGUA AND BARBUDA**



**ENVIRONMENTAL PROTECTION AND MANAGEMENT ACT, 2015**

**No. 11 of 2015**

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**ANTIGUA AND BARBUDA**

**ENVIRONMENTAL PROTECTION AND MANAGEMENT ACT, 2015**

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[ L.S.]



I Assent,

**Rodney Williams,**  
*Governor-General.*

25th August, 2015.

**ANTIGUA AND BARBUDA**

**ENVIRONMENTAL PROTECTION AND MANAGEMENT ACT, 2015**

**No. 11 of 2015**

**AN ACT** to provide for sustainable environmental protection and management, to establish effective allocation of administrative responsibilities for environment management, the undertaking and coordination of environmental management, and related activities, the incorporation of international treaty obligations with respect to the environment into national and law related matters. To establish and consolidate in one legal regime the Implementation of the Multilateral Environmental Agreements and to provide the framework financial mechanism to implement the Act.

**ENACTED** by the Parliament of Antigua and Barbuda as follows: —

**PART I**

**PRELIMINARY**

**Short Title and Commencement**

**1.** (1) This Act may be cited as the Environmental Protection and Management Act, 2015 and shall come into operation on the date that the Minister may, by Notice published in the Gazette, appoint.

## **Interpretation**

**2.** In this Act, unless the context otherwise requires—

“**accident**”, for the purposes of Part VI, means any incident by which oil or another hazardous substance may be introduced, either directly or indirectly, into the environment and which is likely to result in deleterious effects such as harm to marine life or other marine resources, hazards to human health, hindrance to marine activities or impairment of quality of sea water;

“**alter**” in relation to wetlands includes any incremental change that cause an adverse effect to the naturally occurring wetland drainage system;

“**animal**” means a vertebrate or invertebrate animal and includes its eggs or young, whether living or dead;

“**appropriate authority**” means —

- (a) in relation to any hazardous substance transported by sea, air or inland waterway, the Antigua and Barbuda Port authority;
- (b) in relation to any hazardous substance transported by air, the Eastern Caribbean Civil Aviation Authority;
- (c) in relation to any hazardous substance transported by road, the Antigua and Barbuda Transport Board, the Central Board of Health and the Pesticides and Toxic Chemicals Control Board;
- (d) in relation to any hazardous substance stored in any commercial or industrial premises, the Ministry of Trade and the Pesticides and Toxic Chemicals Control Board;
- (e) in relation to pollution control, the Central Board of Health;
- (f) in relation to incidents relating to the construction of or involving the building of or the operation of any commercial, industrial or residential entity, the Development Control Authority;
- (g) in relation to incidents relating to the transportation, removing or taking of marine flora or fauna, the Fisheries Division;
- (h) in relation to incidents relating to the transportation, removing or taking of terrestrial flora, the Plant Protection Division and Forestry Unit;
- (i) in relation to issues relating to National Parks, the National Park Authority;

- (j) in relation to forest fires, the Fire Department
- (k) such other entities as may be appropriate from time to time.

“**archaeological site**” means an area that is declared to be a site of historical significance under this or the National Parks Act or any other related Act;

“**authorised officer**” means an environment officer, forest and wildlife officer, police officer or other Government officer designated as an authorised officer by the Minister;

“**biodiversity**” means the variability among living organisms from all sources, including terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part, and includes diversity within species and between species and of ecosystems and the term “biological diversity shall have the same or corresponding meaning”;

“**biodiversity prospecting**” means any activity undertaken to harvest or exploit, for purposes of research, product development, conservation or industrial or commercial applications—

- (a) samples of genetic resources;
- (b) samples of any derivatives of genetic resources;
- (c) the knowledge, innovations, or customary practices of local communities, and includes investigative research or sampling, but does not include customary uses of genetic resources or derivatives;

“**biological resource**” means a genetic resource or organism or a part of such a resource or organism, a population, or any other biotic component of an ecosystem with actual or potential use or value for humanity;

“**Carbon Sink**” means a process or an activity that removes greenhouse gas from the atmosphere for an indefinite period of time.

“**Caribbean Challenge Window**” means the thematic funding window established under section 85

“**CITES Scientific Authorities**” means the CITES Scientific Authorities designated under section 61;

“**commercial forest activity**” means any forest activity performed by a person other than the owner of the subject forest land for remuneration, or which, when performed, yield commercial forest products; and includes harvesting and logging of timber;

“**communities**” mean assemblages of organisms occupying distinct natural habitats or zones;

“**community groups**” means an group defined as a community group within the meaning of the Friendly Societies Act Cap. 184 ;

“**Community based organization**” means groups fulfilling all the requirements of an established association as prescribed by the Friendly Societies Act.

“**controlled substance**”, for the purpose of Part IV, means any ozone depleting substance listed in Schedule I;

“**Council**” means the Antigua and Barbuda Council;

“**Crown land**” means —

(a) used or vacant Government lands

(b) all lands vested in the Government whether by forfeiture, escheat, purchase or exchange;

“**cultural resources**” means an historical, architectural, archaeological, or cultural site, or an artifact, and includes a place or object that enhances the knowledge or preservation of the environment and cultural heritage of the people of Antigua and Barbuda;

“**customs duties**” includes duties and taxes payable on the importation of goods into Antigua and Barbuda;

“**debt for nature swaps**” means for the purposes of this Act, exchanges in which Antigua and Barbuda is forgiven for a portion of their foreign debt in exchange for local investments in conservation methods.

“**Declaration**” means the OECS St George’s Declaration of Principles for Environmental Sustainability 2001 to which Antigua and Barbuda is a signatory.

“**Department**” means the Department of Environment;

“**derivatives**” means a naturally occurring biochemical compound resulting from the genetic expression or metabolism of biological or genetic resources, even if it does not contain functional units of heredity;

“**development activity**”, for the purposes of Part IV, means any activity likely to alter the physical nature of the coastal zone in any way, and includes the construction of buildings or works, the deposit of wastes or other material from outfalls, vessels or by other means, the removal of sand, coral, shells, natural vegetation, sea grass or other substances, dredging, filling, land reclamation, mining and drilling for minerals, but does not include fishing;

“**Development Control Authority**” means the Development Control Authority established under section 3 of the Physical Planning Act;

“**Director**” means the Director of the Department of Environment;

“**discharge**” means

- (a) for the purpose of Part V, the release of a (harmful substance) from a ship, petroleum exploration facility or other source, whether accidental or otherwise;
- (b) for the purpose of Part V the release of a harmful substance or effluent containing a harmful substance, but does not include-
  - (i) dumping for the purposes of this Act;
  - (ii) the release of a harmful substance directly arising from the exploration, exploitation or offshore processing of seabed mineral resources; or
  - (iii) the release of harmful substances for the purposes of legitimate scientific research into pollution abatement or control; and
- (b) for the purpose of Part V, includes any spillage, leakage, pumping, pouring, emission, emptying or dumping, of a harmful substance whether accidental or otherwise;

“**dumping**”, for the purposes of Part V, means any deliberate disposal at sea from a vessel, aircraft, platform or other structure, of waste or other matter, but does not include—

- (a) the disposal at sea of waste or other matter incidental to, or derived from, the normal operations of a ship or an aircraft, unless the waste or matter is transported to the ship or aircraft for the purpose of disposal or treatment of the waste or matter; and
- (b) the placement of matter for a purpose other than its disposal;

“**ecosystem services**” means the benefits gained by humans from the services provided by the natural environment in the areas of provision, regulation and support;

“**ecotourism area**” means an area designated under this Act as such for the purpose of ecotourism activities;

“**EIMAS Unit**” means the EIMAS Unit established under section 74;

“**endangered species**” means a species of flora or fauna listed in Schedule VIII;

“**environment**” means the components of the earth and includes—

- (a) air, land and water;
- (b) all layers of the atmosphere;
- (c) all organic and inorganic matter and living organisms; and
- (d) the interacting natural or human systems that include components referred to in (a) to (c);

“**environmental audit**” means a systematic evaluation of environmental information about an organization, facility or site to verify whether and to what extent it conforms to specified audit criteria;

“**environmental impact assessment process**” means an analytical system of assessing or reviewing environmental, social and economic consequences that are likely to result from a proposed development activity, beginning at the inception of the activity and ending at its completion or decommissioning;

“**foreign organism**” for the purpose of Part VII includes—

- (a) an active, infectious or dormant stage of a life form, including bacteria, fungi, mycoplasma-like organisms and entities such as viroids, viruses and other entities characterised as living and related to the other life forms mentioned in this paragraph;
- (b) a life form in any stage that is capable of being used for genetic manipulation or is the result of genetic manipulation; and
- (c) prions or other infectious agents, other than—
  - (i) an animal within the meaning of the Animals (International Movement and
  - (ii) Disease) Act, (Cap. 19); and

- (ii) plants, and pests, within the meaning of the Plant Protection Act, (Cap. 329);

**“forest produce”** means—

- (a) timber;
- (b) any part of any product of such timber including charcoal;
- (c) any vegetable growth, whether dead or alive;

**“forestry practice”** means any activity conducted on or directly pertaining to forest land and relating to seeding, planting, growing, harvesting or processing timber and includes logging, pre-harvesting and reforestation activities;

**“forest reserve”** means an area declared to be a forest reserve under the Forestry Act;

**“functions”** includes duties and powers;

**“Fund”** means the Sustainable Island Resource Framework Fund established under section 84;

**“General Board of Directors”** means the General Board of Directors established under section 84;

**“greenhouse gas”** means a greenhouse gas as defined in the United Nations Framework Convention on Climate Change which states that “Greenhouse gases” mean those gaseous constituents of the atmosphere, both natural and anthropogenic, that absorb and re-emit infrared radiation;

**“hazardous substance”** means a substance that is capable of posing a risk to health, safety, property or the environment and includes empty receptacles that have previously been used for the carriage of hazardous substances or hazardous wastes and includes empty receptacles that have been used for the carriage of hazardous substances or waste;

**“incident”** means an event involving the actual or probable discharge into the sea, waterway or land of a harmful substance, or of effluent containing such a substance;

**“hunt”** means to kill, capture, take trap, injure, shoot at, lie in wait for, wilfully disturb or molest and includes any attempt or any assistance in doing any of these things;

**“industrial activity”** includes manufacturing activities;

“**information**” includes knowledge communicated or received concerning a particular fact or circumstance; this may be in any form including data (defined from a statistical stand point as the first level of evidence at the micro level which can be qualitative or quantitative) and statistics (the compilation, processing and transformation of data into aggregates, indicators etc.)

“**introduction from the sea**” means transportation into Antigua and Barbuda of specimens of a species which were taken in the marine environment not under the jurisdiction of Antigua and Barbuda;

“**land**” includes the seabed and anything resting on the seabed or shore of the sea;

“**livestock**” means cattle, oxen, sheep, goats, swine and horses;

“**marine park**” means a marine area declared under this Act or the (Fisheries Act) for use as a multi-use area for which a management plan is prescribed;

“**marine pollutant**” means a substance, whether or not it is classified as hazardous for any other reasons, which has been identified by the International Maritime Organisation, the United Nations Environment Programme, the South Pacific Regional Environment Programme, or any Antigua and Barbuda marine or maritime regulatory authority as potentially harmful to the marine environment;

“**material**” for the purpose of Part IX, means minerals, turf, sea grass and other vegetation;

“**minerals**” includes gravel, limestone, lime, salt, sand, loam and earth;

“**Minister**” means the Minister of Cabinet to whom responsibility for the environment is assigned;

“**multilateral environmental agreement**” means the multilateral environmental agreements under section 81;

“**National Authority for CITES**” means the National Authority for CITES designated under section 61;

“**National Forest Plan**” means the National Forest and Wildlife Contingency Plan prepared under section 19;

“**natural background condition**”, for the purpose of Schedule IV, means the concentration of a substance, pH, temperature, light penetration and other conditions in the water which is closest to that which occurs in the natural state, as defined by the following, where appropriate —



- (a) the condition of the water measured at the specified location before human activities influenced the condition of the water;
- (b) where the condition of the water under paragraph (a) cannot be determined, the condition of the water measured at a comparable location where human activities have not influenced the condition of the water; and
- (c) where the condition under paragraph (a) and paragraph (b) cannot be determined, the standard or guideline mentioned in Schedule IV, if it is more stringent;

“**natural hazard area**” means an area that is hazardous to human life and property because of high winds, high waves, strong currents, high water or landslides;

“**nature reserve**” means an area declared under this Act as a site designated for the conservation and protection of habitat and for which a management plan is prescribed;

“**Non-Governmental Organization**” means an organization defined as a non-Government organization within the meaning of the Friendly Societies Act as well as not for profit, civil society based organizations created by natural or legal persons that operate independently of the Government;

“**oil**”, for the purpose of Part V, means petroleum in any form including crude oil, fuel oil, sludge, oil refuse and refined products other than petrochemicals, and includes the substances listed in Appendix I to Annex I of the International Convention for the Prevention of Pollution from Ships, as Amended (MARPOL 73/78);

“**owner**”, for the purpose of Part V—means, in relation to a ship,”, the registered owner, or, if the ship is unregistered, the person who owns the ship and if owned by a State, the person registered as the operator of the ship including—

- (i) the charterer, manager or operator or any person for the time being responsible for the navigation or management of the ship;
- (ii) the agent in Antigua and Barbuda of the owner, charterer, manager or operator;
- (iii) another agent for the ship; and
- (iv) any other person interested in or in possession of the ship, and any employee or agent of any salvor in possession of the ship; and

- (b) includes, in relation to a fixed or floating platform or other non-natural structure located in or on the sea or sea-bed—
  - (i) a person who has a right, privilege or licence to explore the seabed or subsoil or to exploit the natural resources of them and who is using or is intending to use the structure for that purpose; and
  - (ii) an agent or employee of the person referred to in subparagraph (i), or a person in charge of operations on that structure.

“**Pesticides and Toxic Chemicals Control Board**” means the “Pesticides Control Board established under section 3 of the Pesticides and Toxic Chemicals Act;

”**pick**”, in relation to plants, includes cutting, taking, gathering, uprooting, breaking, removing, damaging or destroying the plant;

“**plant**” includes lichen and fungi;

“**pollutant**” includes any dredged spoil, solid or liquid waste, incinerator residue, sewage, garbage, sewage sludge, chemical waste, hazardous waste, biological material, radioactive materials, heat, wrecked or discarded equipment, oil and oil residue, rock, sand and industrial, municipal or agricultural waste and other such substances which causes pollution of the environment;

“**pollution**” means the introduction, either directly or indirectly, of substances or energy into the environment, which results in deleterious effects such as harm to living resources and marine life, hazards to human health, hindrance to marine activities including fishing and other legitimate uses of the sea, impairment of quality for use of water, air or soil, reduction of amenities or the creation of a nuisance and includes the release or deposit of any pollutant or waste onto land or into the air or water;

“**prescribed**” means prescribed by regulations made under this Act;

“**proposed developer**” means a proposed developer mentioned in section 107

“**project**” for the purposes of compliance under this act means an enterprise planned and designed for the achievement of a particular goal

“**programme**” for the proposes of compliance under this act means a planned series of events, measures and activities with a specific long term aim

“**protected area**” means any area declared as an area of national significance based on the biological diversity located in the area and can be a wildlife or forest reserve;

“**publicly notify**” means publishing a notice—

- (a) in one or more daily newspapers circulating in the local print media;
- (b) in the *Gazette*; and
- (b) on the internet in electronic form that is publicly accessible

and “public notification” has a corresponding meaning;

“**ship**” means any type of vessel and includes a hydrofoil, air-cushion vehicle, submersible, floating craft, or fixed or floating platform;

“**territorial waters**” means the territorial waters of Antigua and Barbuda as defined in section 3 of the Maritime Areas Act, 1982;

“**thematic funding window**” means a funding window established under section 85 and as defined as sub-structure within the fund that allows for specialisation in and a focus on a particular sector, issue, or access modality.;

“**timber means**” trees, whether standing, fallen, living, dead, limbed, bucked or peeled, and includes logs;

“**trade**” means export, re-export, import, buying, selling or exchanging;

“**traditional use**” means an inherited pattern of actions involving the use of natural resources passed on from generation to generation without writing them down

“**Transport Board**” means the Transport Board appointed under section 3 of the Motor Vehicles and Road Traffic Act;

“**waste**” includes any matter prescribed to be waste and any matter, whether liquid, solid, gaseous or radioactive, which is discharged, emitted, or deposited in the environment in such volume, composition or manner as to cause an adverse effect;

“**watershed**” means an area of land where all of the water that is under it or drains off and into a larger body of water such as a river, river system, the sea or a pond;

“**wetland**” means a wetland mentioned in section 48;

“**wildlife**” includes all forms of flora and fauna, including any animal, vertebrate or invertebrate, birds mammals, reptiles, amphibian, crustacean and arthropods and their eggs and young thereof, shoots, or seeds but does not include any marine or domestic animal;

“**wildlife reserve**” means an area declared to be a wildlife reserve under section 59;

### **3. Act binds the Crown**

This Act binds the Crown.

### **4. Objects of the Act**

(1) The objects of this Act are to, within **Antigua and Barbuda**—

- (a) ensure the establishment of an integrated environmental management system in which environment is managed in a sustainable manner;
- (b) ensure that decisions pertaining to the environment are made in an integrated manner in which the Environment Department, in collaboration with appropriate authorities, non-governmental organizations and other persons, determines priorities and facilitates coordination among governmental entities to effectively harmonize activities and where necessary, take action to protect, enhance and conserve the environment
- (c) Provide for preventive and remedial measures for the control and mitigation of all forms of environmental degradation or pollution including the management of hazardous substances and wastes for the purposes of protecting human health and maintaining the quality of the environment;
- (d) Facilitate the implementation of obligations assumed by Antigua and Barbuda under multilateral environmental agreements;
- (d) Make provision for the sustainable financing for the management of the environment and conservation of natural resources in Antigua and Barbuda;
- (e) Promote and encourage among all persons a better understanding and appreciation of the environment; and
- (f) Enhance the legal, regulatory and institutional framework for environmental management in Antigua and Barbuda.

(2) This Act shall regulate the social relations with regard to:

- (a) protection of the environment for the present and future generations and protection of human health;

- (b) conservation of biological diversity in conformity with the natural biogeographic characteristics of Antigua and Barbuda;
- (c) the conservation and use of environmental media;
- (d) the control and management of factors damaging the environment;
- (e) the exercise of control over the state of the environment and over the sources of pollution;
- (f) the prevention and limitation of pollution;
- (g) the establishment and management of the National Environmental Monitoring System;
- (h) environmental strategies, programmes and plans;
- (i) collection of, and access to, environmental information;
- (j) the economic organization of environmental protection activities;
- (k) the rights and the obligations of the State, the municipalities, the juristic and natural persons in respect of environmental protection.

**3. The purposes of this Act shall be achieved by means of:**

- (a) regulation of the regimes of conservation and use of environmental media;
- (b) control over the status and use of environmental media and of the sources of pollution and damage;
- (c) establishment of permissible emission levels and of environmental quality standards;
- (d) management of the environmental media and of environmental factors;
- (e) environmental impact assessment (EIA);
- (f) issuance of integrated permits for pollution prevention, limitation and control;
- (g) designation and management of areas placed under a special regime of protection;
- (h) development of the monitoring system for environmental media;

- (i) introduction of economic regulators and financial mechanisms for environmental governance;
- (j) regulation of the rights and obligations of the State, the juristic and natural persons.

**4. Environmental protection shall be based on the following principles:**

- (a) sustainable development;
- (b) prevention and reduction of risk to human health;
- (c) priority of pollution prevention over subsequent elimination of pollution damage;
- (d) public participation in and transparency of the decision making process regarding environmental protection;
- (e) public awareness regarding the state of the environment;
- (f) polluter pays for damage caused to the environment;
- (g) conservation, development and protection of ecosystems and the biological diversity inherent therein;
- (h) restoration and improvement of environmental quality in polluted and disturbed areas;
- (i) prevention of pollution and damage and of other adverse impacts on clean areas;
- (j) integration of environmental protection policy into the sectoral and regional economic and social development policies;
- (k) access to justice in environmental matters.

**PART II  
ADMINISTRATION**

**5. Responsibilities of Minister**

- (a) Collaborate with other Ministers of Government to secure consistency and continuity in the implementation of this Act and any other laws related to environmental management;

- (b) Establish and coordinate institutional linkages, nationally, regionally and internationally;
- (c) Develop and promote a National Environmental Management strategy and Policy (NEMS) so as to ensure the integration of all aspects of environmental management including ozone depletion, climate change, hazardous wastes, water quality, air quality, watershed, wetland, biodiversity and forestry management into decision-making;
- (d) Oversee the administration of this Act by the Department to which responsibility for the administration of this Act is assigned by section 7;
- (e) Give directives to produce all reports to the climate change convention and will take steps to ensure that the Data can be collected from respective agencies;
- (f) Encourage and facilitate the participation of all persons, nongovernmental organizations and local communities in matters pertaining to environmental management in Antigua and Barbuda;
- (g) Protect and promote the interests of Antigua and Barbuda in the negotiation of environmental treaties and ensure that Antigua and Barbuda meets its international obligations with respect to the environment; and
- (h) Such other duties consistent with those functions as the Minister may from time to time direct.

### **Policy directions and delegation by Minister**

6. (1) The Minister may from time to time give the Department directions of a special or general character in the exercise of the powers conferred and the duties imposed on the Department by or under this Act.

(2) The Minister may in writing delegate to the Director any of his or her functions under this Act other than the power under section 109 to make Regulations.

(3) Any delegation while in force shall not prevent the discharge by the Minister of any functions thereby delegated and may be—

- (a) subject to such conditions, qualifications and exceptions as may be specified; and;
- (c) revoked or varied at any time.

### **Functions of Director, duties and powers of the Department**

7. (1) The Environment Department shall be under the control and direction of the Director and the Department shall perform such functions as are prescribed under this Act.

(2) The Department shall arrange and carry out all functions which are required for the proper discharge of the responsibilities and functions of the Minister under this Act, and without prejudice to the generality of the foregoing, the Department shall—

- (a) administer this Act within Antigua and Barbuda;
- (b) advise the Minister with respect to the formulation of environmental policy and the undertaking of programmes and projects for the effective management and wise use of the environment consistent with the objects of this Act;
- (c) develop and implement policies, programmes and plans for the effective management and conservation of the environment consistent with the objectives of the Act;
- (d) coordinate environmental management functions performed by all persons, governmental and non-governmental entities and statutory rationalisation authorities in Antigua and Barbuda in order to achieve the purposes of this Act;
- (e) make recommendations for the rationalisation of all governmental entities that discharge responsibilities towards the environment;
- (f) undertake the conservation, protection and management of the flora and fauna of Antigua and Barbuda including the management and licensing of biodiversity prospecting;
- (g) advise the Minister on the areas to be designated protected areas and to develop, implement and monitor management plans and programmes for protected areas on Crown lands declared under this Act;
- (h) collaborate with the appropriate authority in ensuring the effective administration and management of any area that is declared to be an environmentally protected area;
- (i) collaborate with the appropriate entity in the issuing of plant preservation orders;
- (j) monitor the compliance of Ministries and other government agencies in Antigua and Barbuda with any regulations, standards, criteria and programmes established pursuant to this Act;



- (k) investigate problems, conduct research, studies, surveys, monitoring programmes and reports related to the matters in paragraph (e);
- (l) promote the planning, approval and implementation of measures designed to ensure sound environmental quality;
- (m) require the payment of charges and user fees under such circumstances as may be prescribed;
- (n) plan and organise training courses for persons involved in environmental management, public education campaigns and relevant information activities to create a better understanding of the need for public cooperation in the maintenance of sound environmental quality;
- (o) Propose additional laws and regulations as may be necessary to address the identified concerns related to environmental management and the maintenance of sound environmental quality;
- (p) enforce the provisions of this Act, including any regulations issued hereunder, in a fair, rigorous and comprehensive manner;
- (q) make reasonable and timely efforts to ensure that environmental laws and regulations comply with relevant international treaties and conventions, including any international agreements on the transboundary movement and management of hazardous substances;
- (r) encourage and facilitate public participation in the development, implementation and oversight of environmental laws and policies;
- (s) develop and implement mechanisms for public comment on draft laws and regulations, consistent with the provisions of this Act;
- (t) cause to be submitted to the Minister, at an agreed time and in such form as the Minister may direct, a report of its activities for the preceding period, and when requested, such other reports as the Minister may require concerning its operations;
- (u) coordinate and implement international agreements to which Antigua and Barbuda is a party; and
- (v) gather, analyse, publish and disseminate environmental data and information, including but not limited to preparing State of the Environment reports and such periodic or other reports that the Government is required to produce including reports required under any multilateral environmental agreement to which Antigua

and Barbuda is a party and provide advice in the field of environmental management and other related services to the Ministry and other government agencies;

- (w) perform such other functions as may be prescribed by the Minister and the Cabinet; and
- (x) undertake anything incidental or conducive to the performance of any of the foregoing functions.

(3) The officers of the Department (hereinafter called “environment officers”) shall discharge functions under this Act as authorised and directed by the Director and in so doing shall be deemed to be acting under the authority of this Act.

(4) All statutory notices and other documents authorised to be issued by the Department under this Act shall be signed by the Director or by an officer to whom this duty is delegated by the Director pursuant to section 9.

(5) In performing its functions, the Department shall make use of current principles of environmental management, namely-

- (a) the “polluter pays” principle: the polluter should bear the cost of measures to reduce pollution decided upon by public authorities to ensure that the environment is in an acceptable state, and should compensate citizens for the harm they suffer from pollution;
- (b) the “precautionary” principle: where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing measures to prevent environmental degradation;
- (c) the “avoidance” principle: it is preferable to avoid environmental damage as it can be impossible or more expensive to repair rather than prevent damage.

### **Appointment of inspectors**

**8.** (1) The Minister may by instrument in writing appoint as an inspector-

- (a) any personnel of the Department or appropriate authority;
- (b) any Environmental Officer; or
- (c) any other individual retained by the Department,

- (d) and specify in that instrument the powers that such person may exercise as an inspector under this Act.

(2) The Department may cause to be issued to each inspector an identity card in the form determined by it containing a photograph of the holder.

### **Delegation of powers**

9. (1) The Director may, in writing, delegate to any other appropriate authority the power to exercise, carry out and perform such of his duties, powers and functions under this Act as he or she deems advisable and on such terms and conditions as he or she may think fit.

(2) An appropriate authority to whom duties, powers and functions have been delegated by the Director under this section shall, subject to such terms and conditions as are specified in such delegation, do all such things necessary for the carrying out of those duties, powers and functions.

(3) Anything done by personnel of an appropriate authority pursuant to a power or duty delegated under subsection (1) has the same force and effect as if it had been done by the Director but shall not prevent the discharge by the Director of any function thereby delegated.

### **Limitation of personal liability**

10. No personal liability shall attach to the Director, personnel of an appropriate authority, environmental officer or other public officer to whom duties, powers and functions have been delegated by the Director under section 9 for anything done, permitted to be done or omitted in good faith in the course of discharge of duties by the Director, officer of the Department or a public officer to whom duties, powers and functions have been delegated by the Director.

### **Cooperation in environmental management planning**

11. (1) In performing its functions the Department shall facilitate cooperation among persons and manage the environment in a manner which fosters participation and promotes consensus, including the encouragement and use of appropriate means to avoid or expeditiously resolve disputes through mechanisms for alternative dispute resolution.

(2) Any Ministry, Department of Government or statutory body having authority over any matter which the Department has power to perform pursuant to this Act shall not, either provisionally or finally, approve or determine such matter without first having consulted the Department thereon.

(3) The Cabinet may require the Minister to submit for its approval, with or without modifications, administrative schemes for-

- (a) the proper apportionment of environmental management functions between the Department and other Ministries, departments of Government or statutory body ; and
- (b) the proper apportionment of the duties necessary for the performance of such functions between officers of the Department and officers of other Ministries, departments of Government or statutory bodies.

(4) An administrative scheme approved pursuant to subsection (3) may be altered or revoked by a revised scheme prepared by the Minister and submitted to and approved by Cabinet, with or without modifications.

(5) An approved or revised administrative scheme shall be published in the Gazette and shall take effect on the date on which it was published.

### **PART III**

#### **SPECIAL POWERS OF INSPECTOR AND DIRECTOR**

##### **Powers of entry and inspection**

**12.** (1) Subject to subsection (2) below any inspector shall, upon presentation of his identity card and such other reasonable evidence of his authorisation by the Department to the occupier or person in charge of any premises or vehicle, be allowed entry into such premises or vehicle for the purpose of—

- (a) developing or assisting in the development of any programme under this Act;
- (b) monitoring compliance with any environmental programme, condition, permit, licence or requirement under this Act;
- (c) obtaining information and samples, and confiscating any article relevant to an offence or violation;
- (d) generally examining and inspecting the premises, facility, plant, structure, equipment, apparatus, operation or process at all reasonable times, and;
- (e) carrying out any provision or requirement of this Act.

(2) An inspector shall not be permitted to enter such premises or vehicle, or obtain any information under this Part, unless—

- (a) the occupier or person in charge of the premises or vehicle consents to the entry, or;

- (b) where the occupier or the person in charge of the premises or vehicle does not consent, the Department first obtains a warrant issued by a Magistrate.

(3) If the use of force is required in executing a warrant, performing an inspection, obtaining samples or other information, or performing any other function under this Act, the inspector shall be accompanied by a police officer who shall render such reasonable assistance as may be necessary.

### **Obtaining information and samples**

**13.** (1) In the course of any entry permitted by section 12, an inspector shall, where necessary and relevant to any environmental programme, condition, licence, permit or requirement under this Act, be allowed to review and copy any documents and records, take photographs, inspect any premises or vehicle and take any samples for purposes of laboratory analysis of any air, water, soil or other material from such premises or vehicle.

(2) If any samples are taken pursuant to subsection (1), the owner or operator of such premises shall, upon request, be provided with a receipt for the sample collected which identifies the type of analyses to be performed, and a portion of the sampled material properly collected in an appropriate container.

### **Procedure for sample and information obtained**

**14.** (1) When a sample is taken pursuant to section 13(2), the person taking the sample shall submit the sample for analysis or examination to a designated scientific laboratory for analysis or examination in accordance with accepted forensic procedures.

(2) In any instance where the Department requests information from a person under section 13, and the person asserts a claim that the information provided to the Department should be treated as a trade secret or confidential business information, the Department shall treat such information as confidential unless-

- (a) the person does not disclose any valid basis for the confidentiality claim within fourteen days after receipt of a request by the Department, or;
- (b) the Department determines that the public interest in disclosing the information clearly outweighs any prejudice to the person who has supplied the information to the Department, and the Department provides such person with a reasonable opportunity to contest such determination in a court of law prior to any public disclosure of the information.

(3) Any officer or person authorised to enter any premises or vehicle which he or she has entered pursuant to section 12, shall leave such premises or vehicle as effectually secured against trespassers as he or she found them

### **Director may order**

**15.** (1) When the Director is of the opinion that a source of contaminant or pollutant is adding to, emitting or discharging into the environment any contaminant or pollutant that constitutes, or the amount, concentration or level of which constitutes an immediate danger to life or the health of any person or to property, he/she may issue an appropriate order directed to the person responsible for the source of such contaminant or pollutant to discontinue adding to, emitting or discharging such contaminant or pollutant.

(2) When, in the opinion of the Director it is necessary or advisable to do so, the Director may, by an order directed to any person, require that person to have on hand and available at all times such equipment and material as the order specifies to alleviate the effect of any contamination or pollution on the environment.

(3) A person to whom an order is directed under this section shall comply with that order.

### **Prohibition notice**

**16.** (1) Where an inspector reasonably believes that any owner or operator of a commercial or industrial facility has conducted or is likely to conduct an activity in any area such as to pose—

- (a) a serious threat to the environment, or;
- (b) risk of serious pollution of the environment or any damage to public health, he may issue a prohibition notice to such owner or operator of the facility, in the manner set out in Form 7 of Schedule VI.

(2) A notice issued under subsection (1) shall specify—

- (a) the provisions of this Act or regulations that are or are likely to be contravened by the activity;
- (b) state the Department's opinion in respect of the activity in question;
- (c) specify the use or threat involved;
- (d) require such steps as may be specified in the notice to be taken within such period as may be so specifies to ameliorate the effect of the activity and, where appropriate, to restore the environment to its condition before the activity took place;

- (e) the date before which the owner or operator shall cease the activity, which date shall not be later than seven (7) days from the date of the notice;
  - (f) the period within which an appeal may be made to the Minister.
- (3) An owner or operator of a commercial or industrial facility commits an offence if:
- (a) an appeal is not made under subsection (6); and
  - (b) the person fails to comply with the requirements of the notice.
- (4) An inspector who issues a prohibition notice to the owner or operator of a commercial or industrial facility shall place the notice in a conspicuous place on the facility indicating that the facility, or a part of it, is not to be used to undertake any activity until the inspector certifies in writing that the threat or risk to the environment no longer exists.
- (5) A notice issued under subsection (1) shall be issued to a person—
- (a) by delivering it personally to the person;
  - (b) by leaving it at the person's usual or last known place of residence or business with another person, apparently resident or employed there and who is apparently in charge or in a position of authority; or
  - (b) by posting it in a registered letter addressed to the person at the usual or last known place of residence or business of the person.
- (6) A person to whom a notice is issued under this section may, within seven (7) days after receipt of the notice, appeal to the Minister against the notice.
- (7) Where an appeal is made to the Minister against a prohibition notice in which the cessation of an activity is ordered, the notice shall remain in effect pending the final determination or withdrawal of the appeal.
- (8) The owner or operator of a facility referred to in subsection (1) shall be guilty of an offence if such person or owner continues or allows the continuation of the activity while a prohibition notice is in effect or after the dismissal of an appeal by the Minister against that notice and shall be liable to the penalties prescribed under paragraph (c) of Schedule **XIV**.

### **Power to compel and execute certain works**

**17.** (1) Where it appears to the Director that for the protection of or in the interest of the environment any works in or on any premises are necessary, the Director may serve or cause to be

served on the owner or occupier of the premises a notice in writing signed by the Director or by any person authorised by the Director in that behalf requiring him to execute the works which the Director considers necessary.

(2) A notice under subsection (1) shall indicate the nature of the works to be executed, specify a period of time after the expiration of which the Director may cause the work to be carried out if it has not been previously executed.

(3) An owner or occupier served with a notice under subsection (1) or any person having an estate or interest in the premises to which the notice relates may at any time before the expiration of the period of time specified in the notice pursuant to the provisions of subsection (2) and in accordance with any rules of court for the time being in force appeal to the Minister against the notice in accordance with the procedures established under section 107 on any of the following grounds—

- (a) that the notice or requirement is not justified for the protection of or in the interest of the environment;
- (b) that there is some informality, defect or error in or in connection with the notice;
- (c) that the Director has refused unreasonably to approve the execution of alternative works;
- (d) that the work required by the notice to be executed is unreasonable in character or extent or are unnecessary;
- (e) that the time within which works are required by the notice to be executed is not reasonably sufficient for the purpose; and
- (f) where the work is work for the common benefit of the premises to which the notice relates and other premises, that some other person being the owner or occupier of the other premises to be benefited, ought to contribute towards the expenses of executing any works required.

(4) The Director may, where a decision on appeal under subsection (3) and on the expiration of the period specified in the notice under subsection (1), cause such work to be carried out and on completion thereof may recover the reasonable costs as a debt due to the government in civil proceedings before a Magistrate notwithstanding the provision in any enactment of a financial limit to the jurisdiction of a Magistrate's Court.



**Acceptance of compensation for offences**

**18.** (1) When any person is reasonably suspected of having committed an offence against this Act, the Director or any authorised officer to whom the Director has delegated this power in writing may accept from that person, on behalf of the Department, a sum of money by way of compensation therefore, in substitution for any proceedings.

(2) Compensation may be accepted pursuant to subsection (1) only where the person suspected of the offence has expressed, in the prescribed form, his or her willingness to settle the matter out of court and the sum of money payable does not exceed the maximum fine for the offence.

(3) On payment of the sum of money set as compensation the suspected person no further proceedings may be taken against that person in respect of the suspected offence.

**PART IV****ENVIRONMENTAL POLICIES AND PLANS****National Environmental Policy Framework**

**19.** (1) In furtherance of section 7(2) (c) the Department shall as soon as practicable after the commencement of this Act, in collaboration with the appropriate authorities, Departments and statutory bodies, undertake the preparation of a Draft National Environmental Policy Framework (hereinafter called the Policy Framework) in accordance with the objects of this Act.

(2) The Policy Framework under subsection (1) shall be based on ecological, economic, social and cultural realities in Antigua and Barbuda, and shall include, at a minimum;

- (a) a description of the environment;
- (b) an analysis of environmental issues of national significance;
- (c) the environmental management strategies to address these issues, and
- (d) the obligations of Antigua and Barbuda in relation to the international environmental agreements to which the country is a party, their relevance to the environmental management framework and the mechanisms that will be employed to implement their requirements.

(3) The Policy Framework shall be divided into chapters, which shall incorporate provisions for a—

- (a) National Policy for the Protection of the Ozone Layer as set out in the Vienna Convention on the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer and its related Protocols;
- (b) National Policy for the Reduction of Emissions from Greenhouse Gases as set out in the United Nations Framework Convention on Climate Change (UNFCCC) and its related Protocols, (hereinafter called the Climate Change Policy);
- (c) National Persistent Organic Pollutants (POPs) and Toxic Chemicals Management Policy as set out in the Rotterdam and Stockholm Conventions and their Protocols;
- (d) National Water Quality Management Policy;
- (e) National Air Quality Management Policy;
- (f) National Watershed and Wetland Management Plan;
- (g) National Biodiversity Strategy and Action Plan;
- (h) Relevant Protected Area Management Plan;
- (i) National Beach and coastal areas Protection and Management Policy; and
- (j) such other policies or plans as the Minister may direct to be prepared.

(4) The policies mentioned in subsection (2) shall be constituted under the Policy Framework established under subsection (1) which shall be submitted to the Minister for his consideration.

(5) After considering the draft Policy Framework the Minister shall cause it to be submitted for public comment and participation in accordance with section 108.

(6) After considering the comments received under subsection (4), the Department shall submit a revised draft Policy Framework to the Minister for approval.

(7) The Policy Framework or any part thereof may be amended from time to time in accordance with the procedures set out in section 21.

(8) The Minister shall as soon as practicable after approving the Policy Framework under subsection (5), cause it to be laid in Parliament.

**Orders to implement Policy Framework**

**20.** The Minister in collaboration with the Minister responsible for the appropriate authority may, by order, specify requirements to be observed for carrying into effect any aspect of the Policy Framework, setting out —

- (a) the objective of the Policy and the objectives it seeks to ensure;
- (b) the boundaries of the areas affected by the order;
- (c) the indicators to be used to measure the water quality;
- (d) the maximum quantities of water pollutants permitted to be discharged; and
- (e) the minimum standards for the control of the classes of water pollutants from specified sources or premises, or classes of sources or premises.

**Amendment of Policy Framework**

**21.** (1) Before amending the Policy Framework, the Department shall give notice to the public of its intention to do so by publishing a notice in a daily newspaper of general circulation and in the *Gazette*, at least three times, over a period not exceeding twenty one days and the notice shall provide—

- (a) a description of the proposed amendment and the reasons for the proposal;
- (b) that submissions on the proposed amendment may be made in writing by any person;
- (c) the closing date for submissions, which must not be earlier than thirty days after public notice; and
- (d) the address where submissions are to be sent.

(2) A copy of the notice under subsection (1) shall be lodged in the Environment Registry.

(3) After consideration of submissions made, the Department shall develop a draft of the proposed Policy and make it available for public review.

(4) The Director shall submit the proposed amendment to the Policy to the Minister and the Minister shall, when satisfied with the amendment, publish a notice that the amendment to the Policy is in effect.

(5) A copy of the amended Policy shall be lodged in the Environmental Registry.

### **Review of Policy Framework and Plans**

22. (1) Within three years or at such later time as may be practicable after the approval of the Policy Framework, the Department shall commence a comprehensive review of any Policy and implementation plan formulated under this Part in order to ensure that development and resource use activities that are to be carried out under any Policy statement or implementation plan are undertaken in such a manner so as not to adversely impact upon the natural resources of Antigua and Barbuda.

(2) Where there is a dispute as to the compatibility between any Policy or implementation Plan and the Policy Framework developed under this Part the matter shall be referred to the Minister, whose decision shall be final.

### **Policy Framework to be consulted for EIAS**

23. The Policy Framework shall provide the basis for screening and evaluating development approvals affecting all activities under the environmental impact assessment process established under this Act and the Physical Planning Act.

### **Compliance with Policy Framework**

24. The Department and all other governmental entities and statutory bodies shall conduct their operations and programmes and, to the extent of its authority, conduct its activities in accordance with the Policy Framework established under this Part.

## **PART V**

### **POLLUTION CONTROL**

#### **Pollution Control Regulations**

25. (1) The Minister may, in accordance with section 107, make Regulations subject to negative resolution of Parliament, for matters required or permitted to be prescribed under this Part and make such other provision as is necessary or convenient for giving effect to this Part.

(2) Regulations made under this section shall be published in the *Gazette* and come into force on the date on which it is published.

**Register of sources of pollution**

**26.** (1) The Department shall establish within the Environment Registry a register of sources of pollution, which shall contain data identifying the quantity, conditions or concentrations relevant to the identification of each pollutant.

(2) The Register under subsection (1) shall be open to inspection by the public at the Department office during ordinary business hours, on payment of a fee as may be prescribed by regulation.

(3) A member of the public may obtain a copy of an entry in the register upon the payment of such fee as may be prescribed by regulation.

**Prohibited pollutants**

**27.** (1) No person shall deposit or release or allow the escape of any water or air pollutant or cause any noise pollution of the environment in a quantity or concentration or condition which is in violation of any applicable standard, condition or permit requirements under this Act.

(2) No person shall emit or cause to be emitted any noise greater in volume or intensity that prescribed in regulations made under section 107 or by any applicable standard, condition or requirement under this Act.

(3) In furtherance of subsection (2) any person who on a continuous or intermittent basis-

- (a) carries on an existing activity or process; or
- (b) proposes to commence any activity or process;

that may cause or result in the production of a pollutant, such person shall—

- (a) immediately notify the Department of—
  - (i) the discharge;
  - (ii) the concentration and amount of the pollutant;
  - (iii) the circumstances of the discharge; and
  - (iv) what action the person has taken or intends to take to restore the environment.

### **Time allowed for compliance**

**28.** (1) Where, on the coming into force of any Regulations made under this Part, any person is engaged in an activity or process that, on a continuous or intermittent basis, causes or results in the deposit or release of any pollutant into the environment in excess of such standard as may be prescribed, the Department shall allow such person a reasonable time in which to bring such activity or process into compliance with the standard.

(2) In determining the amount of time that it is reasonable under subsection (1) the Department may extend favourable treatment to small or medium sized enterprises.

### **Pollution control permits**

**29.** (1) No person shall deposit or release a pollutant on or into land, water or the air in quantities or concentrations in excess of the prescribed standard, except under and in accordance with a pollution control permit issued by the Department.

(2) A permit issued under subsection (1) shall be subject to such conditions as the Department may determine and accompanied by the payment of such fees and charges as may be prescribed.

(3) In deciding whether to grant a permit pursuant to subsection (1), the Department shall take into account relevant ambient environmental standards and the cumulative impact on those standards to the grant of such permit.

### **Notice of intention**

**30.** (1) At least fourteen days prior to making an application for a pollution control permit under section 29, the applicant shall publish in a daily newspaper of general circulation in Antigua and Barbuda a notice of intention to make such an application—

- (a) stating
  - (i) the name of the applicant;
  - (ii) the location of the premises from which the pollutant is to be released;
  - (iii) the general nature of the process to be conducted on the premises giving rise to the pollution;
  - (iv) the pollutant to be released; and

- (v) the receiving environmental medium into which the pollutant is to be released;  
and
- (b) advising members of the public of their right to make objections in writing against the application in accordance with subsection (2).

(2) When a notice has been published in accordance with subsection (1), any member of the public whose interests are likely to be affected by the grant of a pollution control permit may, within twenty-one days of the publication of the notice, make an objection in writing to the Department against the application, stating-

- (a) his or her name and address;
- (b) his or her interest in the matter; and
- (c) the nature and grounds of his or her objection to the application.

### **Application for pollution control permits**

**31.** (1) Any person who releases or proposes to release any pollutant into the environment in an amount or concentration or conditions in excess of the allowable standard shall apply to the Department for the grant of a pollution control permit in the form as determined by the Department.

(2) An application for a pollution control permit shall be submitted to the Department at least ninety days before the date on which the applicant proposes to commence an activity that is likely to result in the discharge of a pollutant into the environment. And shall be in the form as may be determined by the Department and shall be accompanied by—

- (a) in the case of a point source of pollution, such plans and other particulars as are necessary to describe the premises or plant or equipment from which the pollutant is to be released into the environment, identifying the point of release or, in the case of mobile plant and equipment the place at which it will be in operation;
- (b) in the case of a non-point source of pollution, such plans and other particulars as are necessary to describe the situation and extent of the land or water on or over which the pollutant is to be released into the environment;
- (c) in any case where the pollutant to be released will result from a process or activity, a general description of that process or activity;
- (d) in any case where any other statutory consent is required for undertaking that process or activity, proof that the required consent has been obtained;

- (e) any proposals for the reduction, reuse, recycling or treatment of noise, wastes, effluents and emissions generated by that process or activity; and
- (f) particulars of the type, volume and rate of release of the pollutant into the environment.

(3) Where the information supplied by the applicant under subsection (4) is inadequate for the purposes of evaluating an application, the Department may in writing request the applicant to provide such other information as is reasonably required and, where a request for such supplementary information is made, the application will be treated for the purposes of subsection (3) as having been received on the date when the supplementary information is received by the Department.

(4) The applicant may identify any of the information provided to the Department in connection with an application as a trade secret or confidential business information and, if in the opinion of the Director the applicant has shown a reasonable basis for this claim, the Department shall not release or disclose any such information to any other person.

(5) The Department may at any time give notice to a person who discharges into the environment requiring such person to apply for a pollution control permit.

### **Determination of applications**

**32.** (1) The Department in collaboration with the Central Board of Health, the Development Control Authority and any other relevant authority as the Department considers appropriate shall, upon receiving an application for a pollution control permit consider the application and either-

- (a) grant a pollution control permit to the applicant subject to such conditions as it thinks fit; or
- (b) refuse the application giving the applicant the reasons therefor.

(2) In considering an application for the grant or renewal of a pollution control permit the Department shall have regard to—

- (a) the applicable environmental quality standards ;
- (b) the background concentration of pollutants in the environment;
- (c) the desirability of preserving the quality of the environment at the existing level or restoring the quality of the environment to a higher level;



- (d) the desirability of ensuring that the best practicable available treatment or control of substances released into the environment is employed;
- (e) the combined effects of the proposed release of a pollutant into the environment and other existing releases into the environment; and
- (f) the desirability of making provision for future releases of pollutants into the environment.

(3) In considering an application for a pollution control permit the Department shall also consider any objection made in accordance with section 30(2) and may consult such other governmental organisations and persons as it deems necessary for assessing the merits of the application and any objection to it.

(4) Where an application for a pollution control permit is refused by the Department, or is granted by the Department subject to conditions, the applicant may, within twenty-eight days from receipt of notice of the decision, appeal to the Minister in the manner prescribed under section 107.

### **Term of pollution permits**

**33.** (1) Subject to the provisions of section 36, a pollution control permit continues in force for the period specified therein and for any period for which the permit is renewed under subsection 2.

(2) The Department may, on application of the permit holder made not later than ninety days before the expiry thereof, renew a pollution control permit for such period or conditions as it deems fit.

### **Transfer of permit**

**34.** A pollution control permit granted under this Part shall not be transferable.

### **Modification, suspension of permit**

**35.** (1) Where it appears to the Director that it is expedient, having regard to a change in circumstances, including but not limited to changes in environmental conditions or pollution control technology, that any pollution control permit should be modified, the Director may by notice in writing served on the permit holder modify the permit to the extent that it thinks fit.

(2) A person who has incurred expenditure in carrying out work rendered abortive by the modification of a pollution control permit under subsection (1), or has otherwise suffered loss or

damage directly attributable to such modification, is entitled to adequate compensation from the Crown in respect of that expenditure, loss or damage.

(3) The Director may, by notice in writing served on the permit holder, suspend or revoke a pollution control permit where the permit holder—

- (a) fails to pay any amount payable under this Act or the pollution control permit;
- (b) fails to fulfil any of the conditions of the pollution control permit; or
- (c) does not comply with the provisions of this Act or any regulations made hereunder or any other written law.

(4) Where the Director is satisfied that any such default may result in irremediable damage to or irreversible degradation of the environment, the Director may suspend the pollution control permit forthwith, for such period as he or she determines to be appropriate.

(5) The Director shall not revoke a pollution control permit under subsection (3) unless the Director has—

- (a) served notice of his intention to revoke or suspend the permit the permit holder;
- (b) in the notice, specified a reasonable date before which the permit holder may submit in writing any representation which the permit holder wishes the Director to consider; and
- (c) taken into account—
  - i) any action taken by the permit holder to remedy such default or, where the default cannot be remedied, any action taken by the permit holder to mitigate against the recurrence of similar defaults; and
  - (ii) any representation to the Director by the permit holder pursuant to paragraph (b).

(6) Where the Director modifies, suspends or revokes a pollution control permit, the permit holder may, within twenty-eight days from service of the notice of modification, suspension or revocation, as the case may be, appeal in writing against that decision to the Minister, setting out the grounds upon which the appeal is made.

(7) At any time when a pollution control permit is in force, the permit holder may, by giving to the Director one month's prior notice in writing, surrender it, and upon surrender of the permit by the permit holder the Director shall cancel it by instrument in writing.

(8) On the revocation or surrender of a pollution control permit, any right of the permit holder shall cease, but the cancellation of the pollution control permit shall not affect any liability incurred by the permit holder before the revocation or surrender and any legal proceedings that might have been commenced or continued against the permit holder may be commenced or continued, notwithstanding the revocation or surrender of the pollution control permit, as if it had not been cancelled.

### **Pollution charges**

**36.** (1) The holder of a pollution control permit shall be liable for the payment of pollution charges with respect to the release of any pollutant into the environment.

(2) In the case of a pollution control permit, the following pollution charges are payable, in the amount as may be prescribed by regulations—

- (a) a pollution control permit fee for every year during which the permit is in force, based on the costs to the Department of supervising permits granted to different categories of permit holders, paid annually in advance fifteen days prior to the start of the year to which it relates; and
- (b) a pollution levy, calculated on the basis of the amount of each pollutant released into the environment measured as specified by the Department, paid quarterly in arrears within fifteen days after the end of the quarter to which the payment relates.

(3) All revenues received as pollution charges shall be payable into the SIRFF Fund.

(4) Where the Director is satisfied that, while a pollution control permit is in force, the permit holder has expended money on scientific research or on new plant or equipment designed or intended to reduce the release of pollutants into the environment, the Director may allow the permit holder to offset part or all of the costs of such expenditure against the amount of the pollution levy that is payable to the Fund.

(5) When the Director rejects a claim for an offset allowance made pursuant to subsection (4), he or she shall give reasons in writing to the permit holder, and the permit holder may within twenty-eight days of the date of the decision being made appeal to the Minister in the manner prescribed in section 107.

### **Liability for historical pollution**

**37.** (1) Where any person is found to have polluted any part of the environment before the coming into force of this Act, the Department may, by notice require such person to take such measures to rehabilitate the environment in the manner specified in the notice.

(2) Where the Director finds that more than one person was responsible for such pollution, liability for undertaking the rehabilitation measures required pursuant to subsection (1) shall be assessed against such persons on a pro rata basis.

(3) If any person fails or refuses to comply with a requirement imposed by the Director pursuant to subsection (1), within the period of time allowed for compliance specified in the notice, the Department may undertake the necessary rehabilitation measures and may recover the costs of so doing, as a civil debt in a court of competent jurisdiction.

(4) A person who the Director has found to be solely or partly responsible for pollution under this section may file an appeal to the High Court within twenty-eight days of the date of service of the notice given under subsection (1).

## **PART VI**

### **ENVIRONMENTAL MANAGEMENT AND MONITORING**

#### **Strategic environmental impact assessment**

**38.** Where it appears to the Director that a proposed policy, plan, programme or alteration thereto by a Ministry, Department of Government or statutory body may have a significant negative impact on the environment, the Director may require such Ministry, Department of Government or statutory body to carry out a strategic environmental impact assessment of the policy, plan or programme or alteration thereto.

#### **Environmental Management Systems**

**39.** (1) The Department shall promote the adoption and implementation of environmental management standards promulgated by the International Standards Organisation and, in particular, shall lend any assistance that may be required by the Bureau of Standards with regard to the development and implementation of national standards for environmental management and certification and auditing procedures.

(2) The Department shall, in collaboration with other Ministries, Departments of Government and statutory authorities, develop a programme to ensure that all Ministries, Departments of Government and statutory authorities and Government-owned or controlled corporations attain such environmental management certifications including ISO 14001 certification within such time as may be practicable after the coming into force of this Act.

**Environmental management plan for commercial or industrial facility**

**40.** (1) The Director of the Environment shall prepare an inventory of Commercial and industrial facilities existing in Antigua and Barbuda. The list of facilities shall be published electronically on the official website or via any other electronic means of the Environment Division or using the Government of Antigua and Barbuda web portal.

(2) The owner of a commercial or industrial facility shall prepare and submit to the Director, not later than two years after the commencement of this Act or such other time as the Director may direct, a site environmental management plan where the commercial or industrial facility-

- (a) discharges any waste or pollutant into the environment;
- (b) handles, stores, processes, or otherwise controls any hazardous substance;
- (c) produces or generates any waste, pollutant or hazardous substance; or
- (d) engages in any activity that is likely to have a significant negative impact human health or the environment.

(3) An Environmental Management Plan shall contain the following matters—

- (a) a detailed description of the undertaking or activity at the facility or class of facility, including technical information;
- (b) a description of all the environment and socio-economic impacts of all the undertakings at the facility or class of facility, together with the agreed environment management, mitigation or protection plans;
- (c) an implementation and monitoring programme, including reporting;
- (d) an environment commitment and Policy, including mechanisms and programmes for implementation, audit and review of the Policy and the Plan;
- (e) a description of the administrative mechanisms to implement the environment commitment and Policy;
- (f) a description of the organisational structure to implement the environment commitment and Policy;
- (g) a description of the legislative and regulatory requirements, including permits, licences, approvals, environment standards, and codes of practice applicable to the facility or class of facility;

- (h) a description of the communication and training plans in place for all levels of facility staff concerning the Plan, including public information and awareness; and
  - (i) signed approval by all relevant regulatory agencies that the proposed Environmental management plan meet all permit, licensing and approval requirements
- (4) The Minister may, by Order, impose appropriate waste and pollution control measures on the owner of a commercial or industrial facility, which does not comply with subsection (1).
- (5) An Order made under subsection (3) shall specify—
- (a) the minimum environment standards or environment quality criteria that the facility must achieve and the deadline by which they must be achieved; and
  - (b) the mechanisms for inspection, monitoring and enforcement to ensure compliance with the environment standards or environment quality criteria.
- (6) The Minister may, by Notice published in the Gazette, extend the deadline for the establishment of a plan under subsection (1), where plan preparations have commenced but have not been concluded for reasons other than a delay caused by representatives from a facility or class of facility.

### **Code of Environmental Practice**

**41.** (1) The owner of a commercial or industrial facility, or a class of facility, shall in addition to the environmental management plan under section 41 give written notice to the Director of Environment specifying—

- (a) the facility's intention to establish a Code of Environmental Practice as part of their management plan;
  - (b) whether one or more facilities or classes of facility intends to jointly establish a Code of Environmental practice;
  - (c) the nature of industrial or commercial activities undertaken by the facility or class of facility that intends to establish such a code; and
  - (d) whether any other environmental management plan or system exists or operates at the facility or class of facility.
- (2) Upon receipt of the notice under subsection (1), the Director may consult with any Ministry, Department, statutory body, or any other body or persons with regard to the Code of

Environmental practice for the commercial or industrial facility, or class of facility of the applicant.

(3) The Director shall, within a reasonable time the receipt of the notice provided, convene a meeting with senior representatives from the commercial or industrial facility, or class of facility, and where appropriate may invite participation in the meeting by any Ministry, Department, statutory body, local authority, or any other person or body to—

- (a) explain the scope and content of the Code of Environmental Practice which would be contained in the management plan and the reasons why such a code should be established;
- (b) discuss with facility representatives the procedures for the negotiation and establishment of an appropriate Code of Environmental practice, which may include meetings with other Government Ministries, Departments, statutory bodies, local authority, or other bodies or persons; and
- (c) discuss procedures for implementing and enforcing the Code of Environmental Practice once it is established.

(4) During the meeting, or at any stage during the establishment of a Code of Environmental Practice and or other aspects of the management plan, the facility representatives may elect to have the Minister impose appropriate waste and pollution control measures for the facility or class of facility and if the Minister does so, the provisions of section 41 shall apply.

(5) The Director shall provide reasonable assistance to any commercial or industrial facility, or class of facility, in the negotiation and conclusions of an environmental management plan and the resulting code of environmental practices established as part thereof, including—

- (a) the identification or determination of appropriate environment standards or environment quality criteria to meet the requirements under this Act;
- (b) the undertaking of consultations with affected parties and any specified regulatory agency;
- (c) the convening of meetings to discuss issues and concerns relating to the proposed environmental management plan, and to develop suggested alternatives and solutions where concerns have been raised; or
- (d) the presentation or hearing of technical evidence concerning any proposed environmental management system, or waste or pollution management programme, at the expense of the facility or class of facility.

(6) At the request of a representative of the facility or class of facility, the Director may convene a meeting between the representatives or group of representatives, the Department, and any other requested participant in order to clarify requirements, share information, answer questions, submit reports and studies, or for any other reason agreed upon by the parties.

(7) The representatives of the facility or class of facility shall, before implementing the environmental management plan, submit it to the Director for review and the Director shall, review the plan and may either approve or disapprove the plan or impose amendments or conditions to the approval.

### **Self-monitoring and audit**

**42.** (1) The owner of a facility or class of facility shall—

- (a) implement, at his own expense, any environmental management system, operational plan, monitoring programme, environment protection plan, or mitigation measure contained in the Plan; and
- (b) submit regular environment audit reports to the Department and any other specified regulatory agency to demonstrate compliance with any Plan that has been approved under this Part.

(2) The Director may make a recommendation that the owner of a facility that submits an environment audit report under subsection (1) that is in non-compliance with the requirements of this Act not be prosecuted for non-compliances if the owner or facility—

- (a) within fourteen days of the submission of such report establishes and begins to implement, to the satisfaction of the Director and every other relevant regulatory agency, a remediation plan to address the non-compliance within a specified period;
- (b) submits to regular inspections and monitoring, at its own expense for the verification of the implementation of the remediation plan and its effectiveness in changing the factor underlying the non-compliance;
- (b) submits any further environment audit report specified under the Plan, or as required by the Department or other agency; and
- (d) is in conformity with the Act, the regulations and the Plan no later than two years after the establishment of the remediation plan.

(3) Subsection (2) shall not apply where—



- (a) the Department or an appropriate authority is independently aware of the non-compliance prior to receiving the information from the person or facility; or
- (b) an Environmental Management Plan has not been prepared for the facility.

(4) The Department shall not later than three months after the end of each calendar year, submit an annual report on its environmental monitoring activities to the Minister and every such report shall be laid in Parliament and made available to the public, in electronic or printed form, on the payment of a fee to be prescribed.

### **Inspection of facility**

**43.** (1) The Department, the Central Board of Health, the Development Control Authority and any other relevant authority may cause to be conducted any inspection that may be necessary to—

- (a) verify information contained in any audit report submitted pursuant to paragraph 42(1) (b); or
- (b) determine whether the design, development, construction, operation, or abandonment of any facility is undertaken in accordance with any environmental management system, operational plan, monitoring programme, protection plan, remediation plan or mitigation measure set out in the Plan

(2) Where the Director, at the conclusion of an inspection under subsection (1), is of the opinion that the facility has not complied with the Plan, the Director shall inform the Attorney General and request that an action in damages be taken in the name of the Government of Antigua and Barbuda against the facility or its management.

(3) In addition to any penalty or award for damages that may be imposed by the Court for failing to comply with the Plan, the Minister, on the advice of the Director may, by Order, impose appropriate waste and pollution control measures for the facility, including regular monitoring for a specified period at the expense of the facility.

### **Standards, procedures and guidelines**

**44.** (1) For the purpose of administering this Part, the Department, in consultation with the Central Board of Health and the Development Control Authority and any other relevant authority, shall in collaboration with the Bureau of Standards ensure the establishment of standards, guidelines and procedures concerning—

- (a) the establishment of Codes of Environmental practice for various industries, commercial activities and sectors;

- (b) the contents and submission of environment audit reports;
- (c) the review of environment audit reports;
- (d) the training and accreditation of environment auditors;
- (e) the accreditation of laboratories to undertake testing and sampling; and
- (f) sampling and analytical protocols to be utilised by any officer or laboratory.

## **PART VII**

### **NATURAL RESOURCES MANAGEMENT**

#### **Watersheds and Wetlands**

##### **Establishment of Watershed and Wetlands Management Committee**

**45.** (1) The Minister, in consultation with the Ministers responsible for Public Utilities and Fisheries, shall establish a Watershed and Wetlands Management Committee (hereinafter called the Committee) for the management of protected watersheds and wetlands.

(2) The Committee shall be chaired by the Director and shall consist of-

- (a) Director of Agriculture;
- (b) a forest officer;
- (c) a fisheries officer;
- (d) representatives of Antigua Public Utilities Authority, Lands Division and the Pesticides and Toxic Chemicals Control Board, and
- (e) such other local residents and owners of land within a watershed, appointed by the Minister upon recommendation of the Director and in consultation with the Minister responsible for public utilities.

(3) The Committee may make recommendations to the Minister on any matter relating to the adoption and the implementation of any watershed or wetland management plan, including, any proposed revisions of such plan and on any other related matter that the Minister may request.

**Declaration of critical watersheds**

**46. (1)** The watersheds listed in Schedule XI are declared for the purposes of this Act, to be protected watersheds.

(2) The Minister, in consultation with the Minister responsible for Public Utilities, may propose that any watershed or part of a watershed be added to the list of watersheds in Schedule XI, where he or she is of the view that such watersheds are protected and require management for any of the following purposes—

- (a) protection against storms, winds, rolling stones, floods and landslides;
- (b) prevention of soil erosion and landslip, formation of ravines and torrents, and deposit of mud, stones and sand upon agricultural land;
- (c) maintenance of water supplies in springs, rivers, canals and reservoirs;
- (d) protection of topography and vegetative cover;
- (e) protection from free roaming livestock and invasive alien species.

(3) A proposal formulated under this section shall include—

- (a) a description of the watershed, including size, vegetative cover and boundaries and details as to land ownership;
- (b) a statement of the reasons for considering that watershed to require particular protection.

(4) The Director shall solicit comments regarding any proposal under this section and for this purpose shall—

- (a) publish the proposal in the Gazette and at least one daily newspaper of general circulation and broadcast media, inviting interested persons to submit comments within a specified period of time;
- (b) send a copy of the proposal to the Council and the relevant Government Departments and make copies of the proposal available at the Environment Registry to anybody who may request them.
- (c) after a period of not less than two months from publication of the proposal in accordance with this section, the Director shall organise at least one public meeting to discuss the proposal and the Minister, in consultation with the Minister

responsible for public utilities, shall take into consideration any comments which have been received, revise the proposal as appropriate and may by Proclamation declare the watershed to be a protected watershed.

### **Watersheds on private land**

**47.** Where pursuant to section 46, a watershed is located on land that is privately owned, the Minister, in consultation with the Minister for public utilities, may either —

- (a) enter into an agreement with the owner of the land providing for the inclusion of such land within the protected watershed and setting out the respective obligations of the Minister, the Minister responsible for public utilities and the owner; or
- (b) acquire such land in accordance with the provisions of the Land Acquisition Act.

### **Declaration of important wetlands**

**48.** (1) The Minister, in consultation with the Minister responsible for fisheries, may propose that any wetland or part of a wetland be added to the list of important wetlands in Schedule XI, where such wetlands are protected and require management for any of the following purposes—

- (a) floodwater storage;
- (b) erosion control and improved water quality of critical fresh or salt water catchments;
- (c) habitat for fish and wildlife; and
- (d) food chain support.

(2) A proposal under this section shall include-

- (a) a description of the wetland, including size and boundaries and details as to land ownership; and
- (b) a statement of the reasons for considering that wetland to require particular protection.

(3) The Director shall solicit comments regarding any proposal under this section and for this purpose shall—

- (a) publish the proposal in the *Gazette* and at least one daily newspaper of national circulation and broadcast media, inviting interested persons to submit comments within a specified period of time;

- (b) send a copy of the proposal to the Council and the relevant Government Departments and make copies of the proposal available at the environment registry to anybody who may request them.

(4) The Director shall organise at least one public meeting to discuss the proposal and the Minister, in consultation with the Minister responsible for fisheries, shall take into consideration any comments which have been received, revise the proposal as appropriate and may by Proclamation declare the wetland accordingly.

### **Wetlands on private land**

**49.** (1) Where pursuant to section 48 a wetland is located on land that is privately owned, the Minister, in consultation with the Minister responsible for fisheries, may either—

- (a) enter into an agreement with the owner of the land providing for the declaration of such land as important wetland, setting out the respective obligations of the Minister, the Minister responsible for fisheries and the owner; or
- (b) where an agreement under paragraph (a) cannot be reached, acquire such land in accordance with the provisions of the Land Acquisition Act.

### **Conversion of wetlands**

**50.** (1) No person shall alter or backfill any wetland, whether or not such wetland is listed in Schedule XII, for any purposes without the permission of the Director.

(2) A person who contravenes the provisions of subsection (1) commits an offence and shall be liable on conviction to the penalties established under paragraph (b) of Schedule XIV.

### **Conservation enforcement notice**

**51.** (1) The Minister with responsibility for lands may, in collaboration with the Director issue a conservation enforcement notice and have it served on a Ministry, Department, statutory body or other person or body if it appears to him that a condition in a lease agreement with respect to conservation or protection of soil or water or agricultural resources is being violated.

(2) A notice under subsection (1) may require the Ministry, Department, body or person to, within a specified period—

- (a) ensure that the conservation conditions set out in the terms of the agreement are not being violated;

- (b) provide conservation management plans, specifications and any other information that may be required with respect to enhancing and maintaining the quality of soil, or water or agricultural resources; or
- (c) maintain or adopt particular agriculture methods or undertake remediation activities that are likely to facilitate conservation, enhancement or protection of soil, or water or agricultural resources.

(3) The Minister may request the assistance of the relevant authority to take the action set out in the notice where the Minister is of the view that the Ministry, Department, statutory body or person served with the notice, has not, within the specified period—

- (a) fulfilled the requirement in the notice; or
- (b) presented an operational plan indicating how the requirements will be undertaken.

(4) Any costs incurred in giving effect to a notice served pursuant to the provisions of subsection (1) shall be levied against the responsible Ministry, Department, statutory body or person responsible.

### **Conservation of resources in accordance with Plan**

**52.** (1) A person shall, in undertaking any activity connected with soil, agriculture, water, energy or mineral resources, ensure that the activity is at all times in accordance with the provisions of the Natural Resources Management Plan under section 21 (3) (j)

(2) In undertaking any activity connected with agriculture or mining, a person shall ensure that a reasonable balance is achieved between the following considerations—

- (a) the promotion and maintenance of a stable and efficient agricultural and mining industry;
- (b) the conservation and enhancement of any natural resource, and the natural beauty and amenities of the rural areas; and
- (c) the economic and social interests of the rural areas.

### **Protected areas**

#### **Management principles for a protected area**

**53.** (1) Further to the categories identified under Schedule X, where a protected area is a closed area, it shall be managed in a manner that ensures the rehabilitation of any biosphere, flora

and fauna or natural resource that has been damaged or depleted, or is at risk from being damaged or depleted, from any activity.

(2) Where the protected area is an ecotourism area, it shall be managed in a manner as to—

- (a) protect and conserve the natural resources that offer an attraction to tourist visitors; and
- (b) regulate visitor activity to ensure that the carrying capacity of the natural resources is not exceeded.

(3) Where the protected area is a foreshore reserve, it shall be managed in collaboration with the Fisheries Division to protect and conserve the marine resources within the reserve.

(4) Where the protected area is a forest reserve, it shall be managed in a manner as to—

- (a) protect and preserve areas of natural forest;
- (b) ensure that the reserve's natural processes continue unaffected by human activity;
- (c) protect its biological diversity to the greatest possible extent.

(5) Where the protected area is a nature reserve, it shall be managed in a manner as to protect natural resources and maintain natural processes in an undisturbed state in order to have ecologically representative examples of the natural environment available for scientific study, environment monitoring and education, and for the maintenance of genetic resources in a dynamic and evolutionary state.

(6) Where the protected area is a water catchment reserve, it shall be managed in a manner as to conserve, protect and manage the supply of water available.

(7) Where the protected area is a wetland, it shall be managed in a manner as to conserve the diversity and integrity of representative communities of wetland areas or as specified the Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention); and

(8) Where the area is protected as a carbon sink it shall follow the principles developed by the UNFCCC.

### **Establishment of protected areas**

**54.** (1) Without prejudice to the provisions of sections 53 to 57 (inclusive) of the Physical Planning Act, the Minister may, by order, designate as a protected area an area of land or an area within the territorial seas of Antigua and Barbuda to—

- (a) safeguard and maintain representative samples of the natural ecosystems and endangered species that occur in those ecosystems;
- (b) propagate, protect, conserve, study and manage any ecosystem, flora, fauna or landscape;
- (c) protect examples of natural or scientific interest including fossilized wood and Forest of Stones;
- (d) provide educational and recreational areas that will permit the public to obtain valuable information on the resources of the protected area and appreciate and enjoy the values of protected areas;
- (e) provide for multiple-use resource areas which offer protection to ecosystems and resources while providing secondary social and economic benefit.
- (f) in the case of areas declared as forest reserves, as a carbon sink, adaptation measure and for the conservation of soil and water

(2) The categories of protected areas shall be based on the definitions as provided by the International Union for the Conservation of Nature (IUCN) and other relevant international Conventions ratified by Antigua and Barbuda, as contained in Schedule X.

(3) Every protected area is to be managed in accordance with the management principles set out in the management plan created for such areas.

(4) The areas specified in Part 3 of Schedule VIII are hereby declared as Forest Reserves.

### **Protected areas on Crown lands**

**55.** (1) The Minister, acting on the advice of the Director and in collaboration with the appropriate authorities, may designate any area of Crown land as a protected area under section 54 by notice published in the *Gazette*, setting out—

- (a) a description of the boundaries of the protected area; and



- (b) a description of the category of protected area, including the nature of activities permitted or prohibited in it.

(2) Prior to the designation of any area as a protected area, the Minister shall ensure that the Department has—

- (a) consulted with the Council and all the relevant Government Ministries, Departments or statutory bodies;
- (b) given notice of the proposed designation in a timely way so as to ensure that any issue raised by the public may be considered before the designation is made; and
- (c) considered and reported to the Minister on any submissions from any person.

(3) The notice under subsection (2) (b) shall be published at least twice in a daily newspaper of national circulation and also in the *Gazette* and shall provide—

- (a) a description of the category of protected area that is proposed, including the nature of activities permitted or prohibited in it;
- (b) a description of the boundaries of the proposed protected area;
- (c) that submissions on the proposed designation may be made in writing by any person;
- (d) the closing date for submissions, which must not be earlier than thirty days after public notice; and
- (e) the address where submissions are to be sent.

### **Protected areas on private lands**

**56.** (1) Where the owner of private land or a non-Governmental organization recommends to the Department that an area may be suitable for the designation of a protected area, the Department may enter into consultations with such owner or non-governmental organisation with a view to securing the establishment of such an area as a protected area.

(2) For the purpose of consultation, the Department shall—

- (a) convene meetings with the landowner, persons resident on adjoining lands, other interested stakeholders, community groups, Government Departments and statutory bodies to determine the level of interest in securing the establishment of a protected area;

- (b) identify issues of concern relating to the establishment of the proposed protected area;
- (c) determine precise boundaries, land-ownership and tenure in the proposed protected area;
- (d) obtain written confirmation from the landowner to preserve the area in the interest of biodiversity, resource conservation or ecotourism;
- (e) undertake environment surveys to determine requirements for an appropriate protected area management plan; and
- (f) negotiate and attempt to conclude a written covenant, easement or other agreement from the landowner concerning the management plan to be established in the proposed protected area.

(3) The Department shall give notice in the Gazette and at least one daily newspaper of national circulation, of the proposed designation as a protected area if a written agreement is obtained to—

- (a) preserve the area in the interest of biodiversity, resource conservation or ecotourism; and
- (b) administer and manage the area in compliance with a management plan to be established in the proposed protected area,

(4) The Notice under subsection (3) shall provide-

- (a) a description of the category of protected area that is proposed, including the nature of activities permitted or prohibited in it;
- (b) a description of the boundaries of the proposed protected area;
- (c) that submissions on the proposed designation may be made in writing by any person;
- (d) the closing date for submissions, which must not be earlier than thirty days after public notice; and
- (e) the address where submissions are to be sent.

(5) The Department shall report to the Minister after considering any submissions made and make a recommendation as to whether the protected area should be designated and if the Minister

is of the view that the area should be designated as a protected area, the Minister shall, by notice published in the *Gazette*, designate such area to be a protected area.

(6) A written covenant, easement or other agreement concluded with the landowner binds the landowner and his or her successors in title, as well as the Government and may contain terms-

(a) requiring the Government to—

- i. acquire the land under the Land Acquisition Act;
- ii. provide financial and other assistance for the development and management of the protected area;
- iii. provide technical advice; or
- iv. carry out specific activities;

(b) where the land is not compulsory acquired, allowing the landowner to carry out specific activities;

(c) prohibiting or restricting a specific use or management of resources in the area;

(d) requiring a land-owner to refrain from, or not to permit, specified activities; or

(e) specifying the manner in which any financial assistance provided to a land-owner under the agreement is to be administered and applied by the land-owner.

(7) A written covenant, easement or other agreement concluded with the landowner pursuant expires if—

(a) the area no longer supports the biodiversity critical to its determination as a protected area; or

(b) the declared management plan for the area cannot be achieved.

(8) This section does not preclude a landowner from establishing a private conservancy area.

## **Wildlife protection and trade**

### **Protected wildlife**

57. The flora and fauna specified in Schedule VIII are hereby declared to be protected wildlife.

### **Offence to pick**

**58.** A person shall not hunt, pick or otherwise remove wildlife on private lands or Crown lands without the permission of the owner, in the case of private lands, or the permission of the Department, in the case of Crown lands.

### **Designation of closed areas**

**59.** (1) The Minister may, from time to time, after consultation with the Director, designate, by Order published in the Gazette for such period as may be specified in the Order, such closed areas within or outside the protected areas, if he or she considers it necessary for the survival of any biological resource, genetic material, ecosystem or endangered species located in said area.

(2) Where an area has been designated under subsection (1), the Director shall cause to be erected at the area, a sign indicating that the area as a closed area and indicating the period of time for which the area is so designated and the reasons such designation.

(3) The sign erected under subsection (2), shall indicate the activities that may not be performed within the closed area.

(4) Where a closed area is declared on private land, the Minister shall seek to acquire control of the area to be closed through the Land Acquisition Act with relevant compensation being presented to the landowner.

(5) A person who contravenes any provision of this section commits an offence and shall be liable on conviction to the penalties prescribed in paragraph established in paragraph (b) of Schedule XIV.

### **Importation, sale of foreign organisms**

**60.** (1) For the purposes of this section “foreign organism” means—

- (a) any active, infectious, or dormant stage of life form, including bacteria, fungi, mycoplasmas like organisms, entities such as viroids or viruses, and any entity related to the foregoing;
- (b) any stage of life form capable of being used for genetic manipulation, or which has resulted from genetic manipulation; and
- (c) prions or any other infectious agents originating from outside of Antigua and Barbuda;

but does not include an animal as defined in section 2 of the Animals Importation Act Cap. 141 or a plant, plant material or plant pests as defined in section 2 of the Plant Quarantine Act Cap. 156.

(2) A person who wishes to sell, offer for sale, transport or store a foreign organism shall obtain a permit to do so pursuant according to the provisions of this section.

(3) A person who wishes to import a foreign organism or transport, store or sell a foreign organism shall make an application to the Minister responsible for agriculture, in the form set out in Form 3 of Schedule VI.

(4) An application under subsection (5) shall be accompanied by the fee to be prescribed by regulation.

(5) On receipt of an application together with the fee prescribed by regulation, the Minister responsible for agriculture, shall—

- (a) consult with the Department, Ministry responsible for health, the Department of Customs and the Department of Forestry, and any other Government Ministries, Departments or statutory bodies whose mandate would be affected by the issuance of a permit;
- (b) give public notice of the application at least twice in a daily newspaper of general circulation and provide—
  - (i) a description of the nature of the application, including the type of foreign organism sought to be imported;
  - (ii) a description of the likely impact to human health or to ecosystems in Antigua and Barbuda that is likely to result from the importation of the foreign organism;
  - (iii) a description of the environment monitoring or management plans to be established;
  - (iv) that submissions with respect to the subject-matter of the application may be made in writing by any person;
  - (v) the closing date for submissions, which must not be earlier than thirty days after public notice; and
  - (vi) the address where submissions are to be sent; and
- (c) lodge a copy of the notice referred to in paragraph (b) in the Environment Registry.

(7) The Minister responsible for agriculture shall decide, after reviewing the submissions made under subsection (5) (a) whether it is in the interests of Antigua and Barbuda to issue a permit, with or without conditions, for the importation, transport, storage or sale of the foreign organism.

(8) In making a decision, the Minister may consider the results of an environmental impact assessment that he or she may order.

(9) The Minister shall issue the permit as soon as is practicable after the decision is made in the form out in Form 4 in Schedule VI.

(10) A person who contravenes any provision of this section commits an offence and shall be liable on conviction to the penalties prescribed under paragraph (c) of Schedule XIV.

### **Designations for CITES**

**61.** (1) The following agencies are designated as CITES Scientific Authorities-

- (a) the Department which shall be the Secretariat of the Authority;
- (b) the Department of Plant Protection;
- (c) the Department responsible for Fisheries; and
- (d) the Department of Forestry;

(2) The Minister may in collaboration with the Minister with responsibility for any other Ministry, Department or statutory body, designate by notice published in the Gazette, such other Ministry, Department or statutory body to be a Scientific Authority.

(3) A CITES Scientific Authority shall ensure that activities and procedures in relation to the CITES Convention meet the requirements of this Act and the Convention.

(4) A CITES Scientific Authority shall have the power to-

- (a) conduct research concerning species of fauna and flora that are, or are likely to become, threatened in Antigua and Barbuda; and
- (c) collate and disseminate information relating to the trade in endangered, threatened or exploited species of fauna and flora.

**Importation, exportation, trade in endangered species**

**62.** (1) A person shall not import, export or trade in a specimen of an endangered species of flora or fauna except as provided under this Section.

(2) A person who wishes to import, export or trade in an endangered species shall make an application to the Minister in Form 5 set out in Schedule VI accompanied by the fee prescribed by regulations.

(3) The Minister shall, on receipt of an application, refer the matter to the Director, who shall seek the advice of the CITES Scientific Authority.

(4) Where the Minister is of the opinion, based on the advice received from the Director, that the import, export or trade in the specimen would be detrimental to the survival of the species, he or she shall not issue a permit.

(5) Subject to section 98 where the Minister is of the opinion, based on the advice received from the Director, that the trade in the specimen would not be detrimental to the survival of the species, he or she shall issue a permit in the manner set out in Form 6 of Schedule VI, subject to such conditions as he or she deems necessary to protect the species and where he or she is satisfied that—

- (a) the specimen was not obtained in contravention of any law of Antigua and Barbuda or of the State in which it was obtained for the protection or conservation of fauna or flora;
- (b) any permit required has been, or will be granted for the specimen by the State from which, or to which, the specimen originates or is to be conveyed; and
- (c) any living specimen will be prepared and shipped and, in the case of importation, cared for once in Antigua and Barbuda, in such a manner as to minimise the risk of injury, damage to health, or cruel treatment.

(6) A person who submits an application under this section that contains false or misleading information, or who contravenes this section or a permit issued under this section, commits an offence and on conviction shall be liable to the penalties established in paragraph (b) of Schedule XIV.

### **General conditions as to permits**

**63.** (1) A permit issued under this Part authorises the holder of the permit to undertake with the time specified in the permit, the type of trade to which the permit relates, and only in relation to the specimen or specimens of endangered species specified in the permit or certificate.

(2) A permit shall be valid for the period specified therein and shall expire on the date specified therein which shall not be more than six months after the date it was issued, unless it was sooner revoked or surrendered.

(3) A permit shall not be transferable.

(4) A holder of a permit shall produce such permit on demand to a Customs Officer or other Government official involved in the importation, exportation or trade authorised by the permit.

(5) A person who fails to comply with this section commits an offence and shall be liable to the penalties established in paragraph (c) of Schedule **XIV**.

### **Obligation to declare specimen**

**64.** (1) A person in possession of a specimen of an endangered species as part of his personal effects or baggage, shall, on arrival in or departure from Antigua and Barbuda, declare such possession to the Customs or Quarantine Officer on duty at the port of entry or exit, and shall-

(a) permit the officer to inspect and examine the specimen;

(b) afford assistance to the officer in carrying out the inspection; and

(c) produce the relevant permit in respect of the specimen.

(2) The Customs or Quarantine officer shall, if he or she believes on reasonable grounds that a person is in possession of a specimen without a valid permit, order the person to surrender the specimen to such officer.

(3) A person who does not comply with subsection (1), or an officer's order under subsection (2), commits an offence and on conviction shall be liable to the penalties established in paragraph (c) of Schedule **XIV**.

### **Detention of endangered or protected species**

**65.** (1) An environmental officer, park warden, customs officer, quarantine officer or other Government official who finds a specimen of an endangered species or protected wildlife in the possession of any person, whilst in the course of carrying out their duties shall detain such person



and specimen and shall convey such information in relation to the detention, immediately to the Director for action.

(2) Where the Director has been made aware of a detention under subsection (1), he or she shall make an application to the courts for an order to remove the specimen and any corresponding item from the possession of the accused person.

(3) Where an order has been issued under subsection (2), the Director shall ensure that the specimen is properly cared for and housed in a manner so as to minimise the risk of injury, damage to health or cruel treatment.

(4) Where the specimen in possession of the Director was illegally obtained by the person, the Director may, after consultation with the State where the specimen was obtained, return the specimen at the expense of the State.

(5) Where the owner of a specimen that has been seized under this Act cannot be determined or cannot be found, or the specimen is perishable, the Director may dispose of the specimen.

(6) The owner or the person in possession of a specimen that has been detained, shall bear the costs and expenses of disposal, housing, safe-keeping, or re-export of the specimen, and no compensation is payable in respect of such specimen.

### **Return of species**

**66.** (1) In a prosecution for an offence involving a wild animal or a plant or another endangered species, the burden of proving lawful possession and lawful acquisition of the specimen lies with the party against whom the proceedings have been brought.

(2) A specimen that comes into the possession of an officer under this Part shall be immediately conveyed to the Director for safekeeping, disposal or presentation to the appropriate authority.

(3) Where it is determined that the specimen is not an endangered species or a protected wild plant or animal, the officer in possession of the specimen shall immediately return it to the person from whom it was taken.

(4) A person who contravenes any provision of this section commits an offence and shall be liable on conviction to the penalties established in paragraph (b) of Schedule **XIV**.

## **PART VIII**

### **ACCESS TO GENETIC RESOURCES AND THE SHARING OF BENEFITS (ABS)**

#### **Sovereign Rights over Biodiversity**

**67.** It is noted under this Act that the Government of Antigua and Barbuda together with the civil society exercises sovereign rights over the biological resources existing in the country and recognises that it is the duty of the state and its citizens to regulate the access to biological resources as well as related use of community knowledge and technologies. The Government also recognises the need to promote and support the traditional and indigenous technologies that are important in the conservation and sustainable use of biological resources and to complement them by modern technologies so as to ensure the implementation of the relevant provisions of the Convention on Biological Diversity, in particular Article 15 on access to genetic resources and Article 8(j) on the preservation and maintenance of knowledge, innovations and practices of indigenous and local communities.

#### **Interpretation**

**68.** In this section access to biological resources and community rights means acquisition of state biological resources and its related use/knowledge and technologies either by direct or indirect means for research or commercial use.

#### **Application of Part**

**69.** (1) This Part applies to biological resources and related knowledge and technologies as well as their derivatives existing in the national jurisdiction of the country both in-situ and ex-situ.

(2) This Part shall not apply to the traditional use and exchange of biological resources as well as related knowledge and technologies carried out by and between local communities based upon their customary practices.

#### **Guidance for ABS**

**70.** (1) Access to biological resources and related community knowledge and technologies shall be guided by the following principles—

- (a) Research and development on biological resources shall be carried out within the country, unless found impossible to do so. When there are competitive requests for access to biological resources, priority shall be given to the collector who undertakes to conduct the research and development within the country.

(b) Access to biological resources shall be based upon mutually agreed terms and subject to the prior informed consent of the Government of Antigua and Barbuda through its designated competent authority which for the purposes of this Part shall be the Department.

(2) The Department shall work with the relevant authorities as necessary to carry out the requirements and conditions as follows—

- (a) The Collector shall make a request to the Department for access to biological resources by application in writing that contains information inter alia—
- i.) The identification of the applicant and the documents which testify to his legal capacity to contract;
  - ii.) Detailed and specific information about the resources to which access is sought, including its present and potential uses, its sustainability and the risks which may arise from access;
  - iii.) Whether any collection of the biological resources endangers any component of biological diversity;
  - iv.) The purpose for which access to the resource is requested including, where appropriate, the type and extent of commercial use expected to be derived from the resources;
  - v.) Description of the manner and extent of intended involvement of the country in the necessary research and development of the biological resources concerned;
  - vi.) The identification or request for the assignment of the national scientific counterpart institution which will participate in the research and be in — charge of monitoring the process;
  - vii.) The precise sites where the resources are located as well as the places where the proposed research and development activities will be carried out.
  - viii.) An indication of the primary destination of the resources and its probable subsequent destination;
  - ix.) An indication of the benefits, whether economic, technical, biotechnological, scientific, environmental, social or otherwise, that may derive to the country and the concerned local communities and proposed mechanisms of arrangements for benefit sharing

- x.) Description of the knowledge, innovation of practice associated with the resources, if any,
  - xi.) Presentation of an environmental impact assessment where it is required;
  - xii.) Any other information deemed relevant by the Department.
- (b) The Department shall place the application under paragraph (a) in the Environment Registry established under this Act for a period of three months where it may be consulted by any person.
- (c) The Department may approve the grant of access to the material requested with or without conditions.
- (3) The Department shall grant permission after the signing of an agreement with the collector.
- (4) The agreement under subsection (3) shall contain the following minimum requirements
- (a) a limit on the sizes of the samples that the collector may obtain and / or export;
  - (b) guarantee of a deposit of duplicates of all specimens collected with a duly designated government Institution;
  - (c) a legal agreement by the collector to inform the Department and, where appropriate, the concerned local community of all findings from the research and development on the resource material, if a commercial use is derived from such activity;
  - (d) a commitment by the collector not to transfer the acquired resources to any other party without the authorisation of the Department;
  - (e) provision for the payment of royalties amounting to twenty percent of the total value of the resources extracted from the country to the national government or local communities on a yearly basis, in case commercial use is derived from the biological resources taken. Where appropriate and applicable, other forms of additional benefits may be negotiated;
  - (f) submission of a regular status report of research and development on the resources concerned; and

- (g) commitment to abide by the relevant rules of the country particularly those regarding sanitary control, bio-safety and the protection of the environmental as well as the cultural practices, traditional values and customs of the local communities.

(4.) No import or export of any biological resources shall be allowed to and from the country unless the Department confirms that a prior informed consent has been obtained from the country of origin.

(5.) The Department may unilaterally withdraw its consent and terminate the agreement and / or further use of the biological resources concerned whenever it has become apparent that the collector has violated any of the mutually agreed terms, or the overriding public interest so demands.

(6.) The Department shall ensure that a guarantee has been obtained from the State in whose jurisdiction the collector operates regarding the latter's compliance with the mutually agreed terms and conditions of access to the biological resources

(7) Any claims upon biological resources obtained or used in violation of the provisions of this Part shall not be recognised and the certificate of intellectual property or similar certificates and license upon such resources or products and processes resulting from access shall not be valid.

(8) The Department may, when it deems it necessary, establish restrictions or prohibitions on those activities which are directly or indirectly related to access to or introduction of biological resources, particularly in case of—

- (a) endangered taxa;
- (b) endemism;
- (c) adverse effects upon human health or upon the quality of life or the cultural values of the local communities;
- (d) environmental impacts which are undesirable or difficult to control;
- (e) danger of genetic erosion or loss of ecosystems, their resource or their components, because of undue or uncontrolled collection of germ-plasm;
- (f) non-compliance with rules on bio-safety or food's security; and
- (g) use of resources for purposes contrary to national interest and to relevant international

agreements entered into by the country.

## **Community Rights**

71. (1) the Government of Antigua and Barbuda shall recognise and protect the rights of the local communities to collective benefit from their knowledge, innovations and practices acquired through generations (past, present and future) and to receive compensation for the conservation of biological resources in accordance with the provisions of this legislation and subsequent regulations.

(2.) The local communities shall as all times and in perpetuity be the lawful and sole custodians of the relevant knowledge, innovations and practices associated with the genetic resources within their communities.

(3.) No such knowledge, innovations or practices shall be sold, assigned, transferred or dealt with in any manner without the prior informed consent of the local communities concerned and the Department.

(4.) The Government shall ensure that at least 10 percent of benefits obtained from any commercial use of biological resources are paid to the concerned local communities.

(5.) Subject to the above paragraphs of this Article, the Government shall take regulatory measures to establish and implement a system of collective/community rights through a process of consultation with and participation of the local communities which shall include:

- (a) the identification of the types of collective rights that are recognised in each case;
- (c) the identification and definition of the requirement and procedure necessary for the recognition of the collective rights and the title to same;
- (c) definition of a system of collective registration and specific rights and obligations that arise from the entitlement;
- (d) criteria and mechanisms for the standardisation of procedure; and
- (e) licenses for the exploitation and commercialisation of the protected species and varieties

(6.) The Government shall identify, in consultation with local communities, technical institutions to assist them to identify and characterise their innovations.

(7.) The Government shall ensure that local communities have the right not to allow the collection of biological resources and access to their traditional technologies, knowledge,

innovations and practices, as well as to deny and restrictions upon such activities when it is provided that such activities threaten the integrity of their natural or cultural patrimony.

### **Appeals**

**72.** Decisions on approval, disapproval or cancellation of agreements regarding access to biological resources may be appealed through the measures established under section 106 of this Act.

### **Offences**

**73.** (1) Persons contravening this section are guilty of an offence under this Act and are subject in addition to the actions that may be taken in this section to the penalties outlined in Part **XIV** of this Act.

(2.) Without prejudice to the provisions of subsection (1) sanctions and penalties to be provided may include—

- (a) written warning;
- (c) confiscation of collected biological and genetic specimens and equipment;
- (c) perpetual ban from access to biological resources in the country.

(3) Any violation committed under this Part shall be publicised in the national and international media and shall be reported by the competent national authority to the secretariats of relevant international governments and regional bodies.

## **PART IX**

### **ENVIRONMENTAL INFORMATION**

#### **National Environmental Information Management and Advisory System (EIMAS)**

**74.** (1) The Department shall establish and maintain a National Environmental Information Management and Advisory System (EIMAS) for Antigua and Barbuda for the purpose of establishing and maintaining information resources in a centralised manner.

(2) The information in the EIMAS System shall be kept in such manner as the Director thinks fit.

(3) Every Ministry, Department and statutory authority shall provide such technical assistance and information pertaining to the EIMAS system as may be requested from it by the GIS Unit.

### **Environmental Information Management and Advisory Systems (GIS) Unit**

**75.** (1) The Director in consultation with the appropriate authorities shall establish an Environmental Information and Advisory Systems Geographic Information Unit (GIS Unit.)

(2) The GIS Unit shall undertake the following functions—

- (a) the creation and maintenance of the Natural Resources Inventory;
- (b) the provision of information for the management of natural resource management activities;
- (c) the production of public information materials relating to resource management issues; and
- (d) liaison with the public, business community, and non-Governmental organisations in relation to resource management issues.

(3) In furtherance of the functions set out in subsections (2), the GIS Unit may—

- (a) carry-out surveys and inspections, and collate geographic and natural resource information, and;
- (b) collect, store, manage and disseminate information.

### **Natural Resources Inventory**

**76.** (1) The Inventory under section 76 (2)(a) shall form part of the EIMAS system and shall contain information concerning the natural resources of Antigua and Barbuda, including-

- (a) geographic and topographic features;
- (b) soil types and geological formations including known mineral deposits;
- (c) ecological systems and classifications, including—
  - (i) locations of nationally significant flora and fauna;
  - (ii) locations of endangered species of flora or fauna, threatened ecological habitats, and biodiversity reserves;
  - (iii) surface water catchment areas and sub-surface water reserves;



- (iv) marine and coastal resources including coral formations, sea grass beds, mangrove areas, sand deposits, tidal estuaries, fish breeding areas and aquaculture areas;
  - (v) forestry resources, including forest types and densities;
  - (vi) agriculture resources and activities, including, where appropriate, crop varieties, rotational routines, animal husbandry areas, and land tenure systems;
- (d) cultural, archaeological and historic sites;
- (e) human activities, including population centres, industrial and commercial centres, settlement patterns, communication corridors, educational and social support services and infrastructure, and public works including electricity networks, waste management sites, sewage and potable water networks;
- (f) a coastal sensitivity atlas to facilitate oil spill and disaster response and beach management options;
- (g) economic development activities and infrastructure, including tourism developments, mines and quarries;
- (h) a list of the research and development activities involving the biological resources of the country; and
- (i) measures towards the repatriation of information on the country's traditional knowledge and technologies related to biological diversity.
- (2) The Natural Resource Inventory is to be presented on an information storage and retrieval system to facilitate—
- (a) public access;
  - (b) consultation on resource use priorities during the environmental impact assessment process, and;
  - (c) for other purposes.

### **Environment Registry**

77. (1) The Department shall, in collaboration with such appropriate authorities, establish and operate a Registry to be known as the Environment Registry for the purpose of-

- (a) administering the information on the environment;
- (b) providing assistance to the Department in the monitoring, compliance, reporting and notification requirements under multilateral environmental agreements to which Antigua and Barbuda is a party.

(2) The Environment Registry shall contain all documents produced, collected or submitted to the Department, with respect to—

- (a) the import, export, transportation, disposal and management of any hazardous substance or waste;
- (b) hazardous substances, permits or licences;
- (c) environmental impact assessments;
- (d) the dumping of wastes or other matter;
- (e) the import, export, storage or transportation of endangered species of flora and fauna as provided in Part VII;
- (f) the administration of permit requirements under the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES Convention);
- (g) the issuance of permits and licences under this Act or regulations made thereunder;
- (h) any enforcement proceeding undertaken under this Act
- (i) any other matter that may be prescribed by Regulations made under this Act.

(3) In addition to the requirements under subsection (2), the Registry shall contain a list of—

- (a) qualified and accredited environmental consultants, environmental mediators, environmental laboratories;
- (b) current guidelines and codes of practice in environmental matters; and
- (c) copies of all public notices required under this Act.

(4) Every Ministry, Department or statutory authority shall provide any information that may be requested by the Department for inclusion in the Registry.

**Public access to Environment Registry**

**78.** (1) Subject to subsection (2), a person may during normal working hours of the Department, and on payment of a fee to be prescribed by regulations—

- (a) inspect the register; or
- (b) obtain from the Department a certified copy of a portion of the register.

(2) A person shall not have access to a document contained in the registry—

- (a) if the Director determines that disclosure of the information would be contrary to the national interest, or;
- (b) if subject to section 14(2) the information is subject to a trade secret or confidentiality claim.

(3) The Director shall provide a written explanation of any refusal to make information available when requested by a person under this section.

**State of the Environment Report**

**79.** (1) No later than three months after the end of every calendar year, the Director shall prepare and submit to the Minister a report including —

- (a) an assessment of the state of the environment, with particular reference to any significant events or changes occurring during the year under review;
- (b) a description of the activities of the Department during the year under review, including an assessment of the effectiveness of coordination between the Department and other Ministries, Departments of Government and statutory authorities to which environmental management functions and duties have been allocated pursuant to this Act; and
- (c) a list of any other reports prepared by the Department or any other appropriate authority.

(2) The Minister must cause a copy of every such annual report of the Department to be laid in Parliament and made available to the public on the payment of such fee as may be prescribed in regulations.

## **PART X**

### **MULTILATERAL ENVIRONMENTAL AGREEMENTS**

#### **National Co-ordinating Mechanism**

**80.** (1) The Cabinet shall establish a National Coordinating Mechanism (NCM) Committee which shall be responsible for coordinating the management and implementation of multilateral environmental agreements as well as settle any environment related disputes that may from time to time be referred to them.

(2) The Committee shall comprise—

- (a) four members appointed by Cabinet one of which shall be a representative of the Ministry of Foreign Affairs who shall chair the Committee and of the remaining three at least one of whom shall be from a non-Governmental organisation with expertise in environment matters and one of whom shall be from the business community;
- (b) the Director, who shall be the Secretary to the Committee;
- (c) five other members of the Committee, appointed from the public service, who have expertise in health, fisheries, agriculture, forestry and public works; and
- (d) a representative of the Public Utilities Authority.

(3) The Committee shall advise the Cabinet on any issues are referred to it in respect of international environment agreements or environment disputes that need to be settled.

(4) Upon the commencement of this Act, the Committee shall undertake the review, with the goal of making recommendations for the ratification of multilateral environmental agreements which have not yet been ratified by Antigua and Barbuda.

#### **Multilateral environmental instruments**

**81.** (1) When the Minister of Foreign Affairs publishes a multilateral environmental instrument, such published version shall constitute evidence of its contents.

(2) The Minister may amend Schedule IX from time to time.

**Negotiation and accession to agreements**

**82.** In the performance of his or her statutory duty under section 5(b), the Minister shall endeavour, as far as practicable, to ensure that Antigua and Barbuda—

- (a) collaborates with other member states of the Organisation of Eastern Caribbean States and the Caribbean Community to develop and strengthen sub-regional and regional negotiating and mechanisms for multilateral environmental agreements;
- (b) cooperates with other member states of the Organisation of Eastern Caribbean States and the Caribbean Community as far as practicable in formulating common political positions in the negotiation and implementation of multilateral environmental agreements;
- (c) integrates the principles contained in the Lillendaal Declaration into the negotiation and implementation of multilateral environmental agreements.
- (d) establishes appropriate mechanisms to facilitate the exchange of information relating to the negotiation, implementation and compliance with multilateral environmental agreements;

**Incorporation of international obligations into national law**

**83.** (1) The multilateral environmental agreements specified in the Schedule VIII have the force of law in Antigua and Barbuda.

**PART XI****FINANCIAL PROVISIONS****Establishment of Sustainable Island Resources Framework Fund (SIRFF)**

**84.** (1) There is hereby established, for the purposes of this Act, a fund to be known as the Sustainable Island Resources Framework Fund (SIRFF), herein known as ‘The Fund’, as provided for under section 6 (1) of the Finance and Audit Act subject to the provisions as outlined in this Part. The Management of the Fund shall be vested in the Board.

(2) The general purpose of The Fund is to provide adequate, and sustainable financing for the Implementation of the Multilateral Environmental Agreements and their implementation.

(3) The Fund shall be managed by a General Board and the provisions of Schedule XIII shall have effect as to the composition, powers and administration of the Board and otherwise in relation thereto.

### **Establishment of thematic funding Windows**

85. (1) Each thematic Windows established under section 85 (2) shall—

- (a) be administered by a separate and independent Board of Directors who shall be appointed by the Governor General upon the advice of the General Board.
- (b) establish its own accounts;
- (c) operate under financial rules and procedures prescribed by Regulations made under this Act;
- (d) subject to this Act and Regulations, may develop its own regulations and procedures.

(2) In furtherance of section 85 (1) (b) the following three thematic funding Windows are hereby established —

- (a) the Caribbean Biodiversity Window;
- (b) the NGO and CBO Window; and
- (c) The Private Sector Window.

(3) The membership of the thematic funding windows Boards under subsection (2) shall be established by Regulations made under this Act.

### **Accounts of Board and Thematic Windows**

**86.** The Board and any thematic Window established under this Part shall keep proper records of accounts in accordance with generally accepted inter standards and principles and as directed by the General Board of the SIRFF and shall prepare and retain financial statements in respect of each financial year.

### **Audit of General Board and Thematic Windows**

**87.** The Board shall as soon as is practicable after each financial year have its accounts audited annually by an independent auditor appointed by the General Board, who shall conduct the audit in accordance with generally accepted international auditing standards and principles.

**Annual report of General Board**

**88.** (1) Subject to sub-section (2) and not later than the three months after the end of each financial year, the Board shall submit to Cabinet an annual report on the work and activities of the Board for that financial year and Cabinet shall not later than one month later lay the same in Parliament.

(2) An annual report pursuant to sub-section (1) shall be in such form as prescribed by Regulations and shall be accompanied by the auditor's report pursuant to section 87.

(3) A summary of an annual report pursuant to sub-section (1) shall be published in the Gazette and at least two newspapers in general and at least weekly circulation in Antigua and Barbuda and the entire annual report shall be made available to the public in electronic format;.

**Appeal**

**89.** Any person who is aggrieved by a decision as to the allocation of funds made under section 84(4)(c) may, within twenty-one days of the receipt of a decision, appeal to the Board. If any person is not satisfied with the decision, that person can appeal to the Minister. Against that decision in the manner prescribed in section 105.

**Exemption from taxes**

**90.** The Fund and the Board are exempt from the payment of any stamp duty, customs duty, value added tax, motor vehicle tax, fee, charge assessment, levy impost or other tax whatsoever, on any income expenditure or asset of the Fund or the Board.

**Rules for operating the Fund**

**91.** For the purpose of regulation and controlling the operation of the Fund, the Board may make Rules with respect to:

- (a) the bank into which revenues of the Fund are to be paid and the designation of any such bank account;
- (b) the method to be adopted in making payments out of the Fund; and
- (c) generally as to matters necessary for the proper keeping and control of the Fund.

## **PART XII**

### **COMPLIANCE AND ENFORCEMENT**

#### **Notice of violation**

**92.** (1) Where a provision of this Act specifically requires that an action be taken where the Director reasonably believes that a person has committed an offence under this Act or regulations made thereunder, the Department shall cause a written notice of violation (hereinafter called a “Notice”) on such person in the form determined by the Department which shall include—

- (a) a request that the person make such modifications to the activity within a specified time, as may be required to allow continuation of the activity; or
- (b) an invitation to the person to make representations to the Director concerning the matters specified in the Notice within a specified time.

(2) Where a matter specified in the Notice may be satisfactorily explained or otherwise resolved, the Department may

- (a) cancel the Notice or dismiss the matters specified therein; or
- (b) enter into a consent agreement containing such terms and conditions as the Director deems fit.

#### **Issue of administrative order**

**93.** (1) The Director may issue an administrative order where a person—

- (a) fails to make representations to the Director as required under section 90(1)(b) within the time specified in the Notice; or
- (b) is unable to resolve with the Department all matters specified in the Notice.

#### **Contents of administrative order**

**94.** (1) An Administrative Order served by the Director shall, where appropriate—

- (a) specify details of the violation of one or more environmental requirements;
- (b) direct the person to immediately cease and desist from the violation or specify a date for coming into compliance;



- (c) direct the person to immediately remedy any environmental conditions or damages to the environment arising out of the violation or specify a date by which such remedial action shall be completed;
- (d) direct the person to undertake an investigation regarding any environmental circumstances within such person's responsibility or control, including any release of a pollutant or hazardous substance into the environment;
- (e) direct the person to perform any monitoring or record-keeping activities;
- (f) direct a person to comply with any other requirement under this Act.

(2) Any person who is aggrieved by a decision made under subsection (1) may, within twenty-one days of the receipt of a decision, appeal to the Minister against that decision in the manner prescribed in section 107.

#### **Other actions by the Department**

**95.** (1) Whenever the Director reasonably believes that any person is currently in violation of any provision of this Act or regulations made thereunder, or is engaged in any activity likely to result in a violation, the Director may in addition to, or in lieu of any actions authorised under this Act—

- (a) seek a restraining order or other injunctive or equitable relief to prohibit the continued violation or to prevent the activity that would lead to violation;
- (b) seek an order for the closure of any facility or any prohibition against the continued operation of any processes or equipment at such facility in order to halt or prevent any violation
- (c) pursue any other remedy which may be provided by law.

(2) Any action under this Part may be instituted in addition to any other action taken by the Director under this Act.

#### **Prosecution of offences**

**96.** (1) The Director or any other authorised officer or appropriate authority may summon before the courts and prosecute any person reasonably suspected of the commission of any offence against this Act, whether punishable on summary conviction or indictment.

(2) In the conduct of any proceedings pursuant to subsection (1), the Director or authorised officer may be assisted or represented by an Attorney at Law.

### **Private party actions**

**97.** (1) Any person who is aggrieved by a violation of this Act may, with the leave of the court, institute proceedings in a court of competent jurisdiction against any other person who he or she reasonably suspects is responsible for that violation.

(2) The court may grant leave to institute proceedings pursuant to subsection (1) to any person or group of persons who has a specific interest in the claimed violation of the Act or any other person or group of persons who can satisfy the court that the proceedings are justifiable in the public interest.

(3) In any proceedings brought under this section, the burden of proof is on the person who institutes the proceedings.

### **Liability of company officers**

**98.** (1) When an act or omission that is offence under this Act or any Regulations made under this Act has been committed by a company incorporated under the Companies Act, any individual who was at the material time a director or officer of that company may be found personally liable for that offence, in addition to or in substitution for any liability to which the company is subject, if that act or omission was done with his or her knowledge, consent or acquiescence, or if he or she did not exercise reasonable diligence to prevent the commission of that offence.

(2) In any proceedings against a director or officer of a company pursuant to subsection (1), the onus of proving that the offence was committed without his or her knowledge, consent or acquiescence or despite the exercise of reasonable diligence on his or her part is on the accused.

### **Reservation of civil remedies**

**99.** Nothing in this Act takes away or interferes with the right of the Crown or any other person to sue for and recover, at common law or otherwise, compensation for or in respect of damage or injury caused by an offence under this Act.

**PART XIII****OFFENCES AND PENALTIES****Discharge to water resource**

**100.** (1) A person shall not discharge or emit any pollutant into a watercourse other than in accordance with the provisions of this Act.

(2) A person is considered to have caused water resources to become polluted, where—

(a) the person causes or permit to be released into an underground water system, water way or water body any waste, whether solid, liquid or gaseous—

(i) which is prohibited under this Act or any other relevant enactment, or

(ii) which does not comply with any standard prescribed for the management of water resources; or

(b) the person causes or permits the discharge of any hazardous substance whether liquid, solid or gaseous into the waterway, water body or underground water system in contravention of this Act or regulations made pertaining thereto.

(3) A person who contravenes subsection (1) commits an offence and shall be liable to the penalties prescribed under paragraph (c) of Schedule **XIV**.

**Discharge into the atmosphere.**

**101.** (1) A person shall not discharge or emit any gaseous substance into the atmosphere other than in accordance with the provisions of this Act.

(2) A person is taken to have discharged or emitted a gaseous substance into the atmosphere where that person—

(a) causes or permits to be released into the atmosphere any waste, whether solid, liquid or gaseous,

(i) which is prohibited under this Act or any other relevant enactment, or

(ii) which is in excess of any standard prescribed for as the maximum allowable concentration permissible for the protection of human health as specified in Part 4 or Part 5 of Schedule IV;

- (b) causes or permits the discharge of any hazardous substance whether solid, liquid or gaseous into the atmosphere in contravention of this Act and its regulations;
- (c) uses a chemical substance or fuel, the use of which is prohibited under this Act; or
- (d) releases a controlled substance in contravention of an enactment dealing with the use of ozone-depleting substances or the manufacture, assembly, installation, operation, maintenance, removal, sale or disposal of goods, equipment, machinery, or plant containing or using an ozone-depleting substance.

(3) A person who contravenes subsection (1) commits an offence and shall be liable, on conviction to the penalties prescribed under paragraph (c) of Schedule **XIV**.

### **Hunting of specified animals**

**102.** (1) Subject to the provisions of the Forestry Act a person shall not—

- (a) hunt a protected animal listed in Part 1 of Schedule VIII;
- (b) hunt in the areas outlined in Part 3 of Schedule VIII;
- (c) export, possess, sell, expose for sale or otherwise dispose of a protected animal listed in Part 1 of Schedule VIII, or a part of such an animal, whether or not it is alive;
- (d) harvest or keep a protected plant listed in Part 2 of Schedule VIII;
- (e) sell, pick or remove by any other means or keep a protected plant listed in Part 2 of Schedule VIII; or
- (f) export, possess, sell, expose for sale or otherwise dispose of the tooth of a (cetacean).

(2) A person shall not—

- (a) hunt a protected animal that is smaller than the size limit provided in Schedule VII or in the case of marine species, the size limit specified under the Fisheries Act;
- (b) hunt within a specified closed season established in this or any other Act, a protected animal listed in Schedule VIII; or
- (c) hunt within a specified closed area under this or any other act a protected animal listed in Schedule VIII.

(3) A person shall not—

- (a) remove, injure, obstruct access to or destroy the nest of a protected bird; or
- (b) damage, destroy or obstruct access to a place used by a protected animal for shelter, protection or breeding.

(4) A person who wishes to sell, harvest or keep a protected biological resource or genetic material, may make an application to the Director in the manner provided in Form 1 of Schedule VI and the Director may issue a permit for the person to do so if the Director is satisfied that the biological resource or genetic material is required for—

- (a) traditional use;
- (b) a scientific purpose; or
- (c) biodiversity protection.

(5) The Minister may, by notice published in the Gazette, prohibit or restrict, either indefinitely or for the period specified in the notice, the hunting or removal of an animal or plant specified in the notice in or from an area defined in the notice, where the Minister considers it necessary for—

- (a) the control of the spread of disease;
- (b) the protection of human life and property;
- (c) conservation and management of flora and fauna; or
- (d) biodiversity.

(6) A person who contravenes this section commits an offence and is liable upon conviction to the penalties prescribed in paragraph (b) of Schedule XIV

### **Killing of or accidental injury to animal or plant**

**103.** (1) Where a protected animal is killed or injured by accident, or a protected plant is picked by accident, the person responsible for the incident shall as soon as possible, and in any event within seven days after such incident, provide a written report to the Department concerning the circumstances and date of the accidental occurrence.

(2) The Department shall, as soon as is practicable after the receipt of a report under subsection (1), inspect the place where the incident occurred; and

- (a) where an animal has been injured, protect the animal from further harm and ensure that necessary veterinary assistance is provided or the animal be returned to its natural habitat as soon as practicable; and
- (b) where an animal has been killed or fatally injured, retrieve the animal or subsequently dispose of it according to directions to be given by the Director.

(3) A person who contravenes this section commits an offence and shall be liable on conviction to the penalties prescribed under paragraph (a) of Schedule **XIV**.

### **Offence to undertake commercial logging**

**104.** (1) No person shall undertake commercial logging on any lands unless the person has obtained a permit to do so issued by the Director.

(2) A person who contravenes, subsection (2) commits an offence and shall be liable on conviction to the penalties prescribed in paragraph (e) of Schedule **XIV**.

## **PART XIV**

### **MISCELLANEOUS**

#### **Scientific Evidence**

**105.** (1) The Minister shall by Order designate at least one scientific laboratory in Antigua and Barbuda to be the designated scientific laboratory for the purposes of this Act.

(2) A certificate signed by the person in charge of a designated scientific laboratory appointed under subsection (1), stating that a substance has been analysed or examined and stating the results of the analysis or examination, is admissible in any proceeding under this Act as sufficient evidence of the matters in the certificate and of the correctness of the results of the analysis or examination.

(3) A certificate shall not be admitted into evidence under subsection (2) in a proceeding for an offence under this Act unless the defendant has been given a copy of the certificate together with reasonable notice of the intention to produce the certificate as evidence in the proceedings.

(4) In any proceedings for an offence against this Act, the defendant shall not adduce evidence in rebuttal of a certificate issued by a designated scientific laboratory in relation to any matter of which the certificate is evidence unless, within fourteen days after a copy of the certificate is given to the defendant in accordance with subsection (3), or such further time as the

court may allow, the defendant gives to the prosecutor notice in writing of the intention to adduce such rebuttal evidence.

### **Service of documents**

**106.** (1) Subject to the provisions of this section, any notice or other document required or authorised to be served under this Act, or under any regulation, order, direction or other instrument in writing made under this Act, may be served either—

- (a) in the case of a natural person-
- (b) by delivering it directly to the person on whom it is to be served; or
  - (i) in a case where an address for service has been furnished by the person on whom it is to be served, by delivering it or sending it by registered mail to that person at that address; or
  - (ii) by such means of substituted service as are recognised or authorised by the Rules of the Eastern Caribbean Supreme Court; and
- (c) in the case of a body corporate, by serving it in accordance with the process for effecting service on a company incorporated under the Companies Act.

(2) Where the Notice or other document is required or authorised to be served on any person as having an interest in any land, and the name of that person cannot be ascertained after reasonable enquiry, or as an owner or occupier of the premises, the Notice or other document is deemed to be duly served if, being addressed to the owner or occupier of the specified premises, it is—

- (a) delivered or sent to the premises by registered mail and is not returned to the sender; or
- (b) affixed conspicuously to some building or fixed object on those premises.

(3) Where a notice or other document to be served under this Act must be served on more than one person, the fact that it was not duly served on any of those persons does not invalidate any action or other proceedings against any other of those persons.

### **Procedure on appeal to Minister**

**107.** (1) Where a provision of this Act specifically requires that an appeal may lie to the Minister the procedure set out in subsection (2) shall apply.

(2) On receipt of the appeal, the Minister shall establish an Appeals Committee comprised of persons outside of the public service having expertise in the project area being considered.

(3) The Committee shall review the matter before it on appeal, and within twenty-eight days of receipt of the appeal, shall report to the Minister on its findings.

(4) Within fourteen days of the receipt of the report from the Committee, the proposed developer shall be notified of the decision of the Committee by the Department.

(5) Save as otherwise provided in this section, the decision of the Appeals Committee shall be final.

(6) Any person who is not satisfied with the decision of the Appeals Committee may appeal to the High Court against that decision.

### **Public comment and procedures**

**108.** (1) Where a provision of this Act specifically requires that an action be submitted for public comment and participation, the Department shall—

- (a) publish a notice of the proposed action in the Gazette and at least one daily newspaper of national circulation—
  - (i) advising of the matter being submitted for public comment, including a general description of the matter under consideration;
  - (ii) identifying the location where the comments are to be sent, and;
  - (iii) stating the length of the public comment period.
- (b) establish and maintain a record of the proposed action and make such record available to the public at one or more locations.

(2) The record required under subsection (1) (b) shall include a written description of the proposed action, the major environmental considerations involved in the matter under consideration, copies of documents or other supporting materials which the Department believes would assist the public in developing a reasonable understanding of those issues and a statement of the Department's reasons for the proposed action.

(3) The Department shall receive written comments for not less than thirty days from the date of notice in the *Gazette* and, if the Director determines that there is sufficient public interest, it may hold a public hearing for discussing the proposed action and receiving verbal comments.



**Regulations**

**109.** (1) The Minister may make regulations, subject to negative resolution, for giving effect to the provisions of this Act.

(2) Without prejudice to the generality of subsection (1), the Minister may make regulations for—

- (a) the form of any application, notice or other document required to be made, issued or served under this Act;
- (b) the payment of fees or any other charges payable under this Act;
- (c) the payment of any compensation payable under this Act and the manner of applying for such compensation;
- (d) the adoption of standards and procedures for the carrying out of environmental audits and set out the circumstances in or under which environmental audits must be carried out on any premises, the qualifications of persons by whom such audits may be carried out, and the measures that shall be taken with respect to the findings of such audits;
- (e) procedures for the registration of sources from which pollutants may be released into the environment and the characterisation of such sources;
- (f) the quantity, condition or concentration of pollutants or substances containing pollutants that may be released into the environment generally or by specific sources or categories of sources;
- (g) procedures and standards with respect to permits and licences required for a person to install or operate any process or other source from which pollutants will be or continue to be released into the environment;
- (h) the form and manner of
  - (i) applying for a licence, permit or certification that may be granted by the Department;
  - (ii) revoking, suspending, varying or cancelling a permit or licence or a condition in that permit or licence;

- (iii) incentive programmes or mechanisms which encourage the use of effective environmental systems and the achievement of improvements in environmental quality;
- (a) designation of hazardous substances or categories of hazardous substances under section xx, and the performance standards, procedures, safeguards and licensing or permitting requirements in accordance with which such hazardous substances shall be handled;
- (b) the requirements with respect to the handling and disposal of such categories of waste and the licensing of facilities at which such wastes are handled or disposed of;
- (c) procedures and standards for the periodic or continual monitoring of pollutant releases in conjunction with any process, activity, vehicle or premises;
- (d) the establishment of ambient environmental quality criteria and standards which may be taken into account in setting any general, categorical or source-specific limitations for any new or continued release of pollutants into the environment;
- (e) the design, construction, operation, maintenance and monitoring of facilities or processes for the control of pollution and the handling of wastes;
- (f) performance standards with respect to the generation and release into the environment of pollutants from mobile or immobile machines and equipment;
- (g) the particulars to be recorded in a register required to be kept under this Act and the form in which the register must be kept;
- (h) information to be included in the Environmental Register;
- (i) the amendment of the Schedules to this Act;
- (j) prescribing anything required by this Act to be prescribed.

(3) Any Regulations made under this Act shall be published in the Gazette and shall come into force on the date of publication.

### **Amendments, savings and repeals**

**110.** (1) The Wild Bird Protection Act is hereby repealed.

(2) In so far as anything done under the former Act could have been done under a corresponding provision of this Act, it is not invalidated by the repeal but has effect as if done under that provision.

(3) Where any written law or document refers expressly or by implication to the former Act, the reference must be construed (except where the context otherwise requires) as a reference to the corresponding provision of this Act.

(4) Every proceeding in respect of breaches of or offences committed against the former Act may be continued and completed—

- (i) if the proceeding has been partly or wholly heard, as if the former Act were still in force; and
- (ii) in all other cases, as if the proceeding had been commenced under this Act.

(5) The enactments referred to in Schedule XIV are amended in the manner or repealed to the extent set out in that Schedule.

## **PART XV**

### **Environment Information, Research, Education and Training**

#### **111. (1) Information gathering**

(2) The Minister may cause to be collected information, by means of voluntary surveys, questionnaire, inquires, and other similar means for the purpose of conducting research, creating an inventory of data, formulating objectives, guidelines, codes of practice or draft regulations, reporting on the state of the environment, or administering any provision of this Act.

#### **112. National laboratory program**

The Director in conjunction with the Department of Analytical Services shall develop and implement a program for the provision of the environment laboratory services required for the implementation of this Act, taking into account

- (a) the anticipated needs for environment laboratory services under this Act and that required for Antigua and Barbuda to fulfil its obligations under the Stockholm Convention on Persistent Organic Pollutants and other chemicals conventions ;
- (b) the anticipated needs for other, related laboratory services in Antigua and Barbuda;
- (c) the state of an environment health laboratory capacity in Antigua and Barbuda; and

- (d) the potential for private analytical services to supply some or all of the environment laboratory requirements of Antigua and Barbuda in a cost-effective manner.

### **113. Scientific, technical and management research**

(1) The Director shall encourage and develop scientific, technical and management research programs on environment issues, including ecological processes, threatened or endangered species, development of measures for the management, recovery and protection of protected areas and species and their habitats, assessment of the effectiveness of measures taken to implement management and recovery plans and monitoring programs and assessments.

(2) The Director shall provide technical assistance for training, research, education and management pertaining to environment issues to relevant agencies, sectors, NGOs and CBOs as well as any other that may request this information.

(3) The Minister may seek information as necessary from scientifically or technically qualified experts and organizations.

### **114. Public information, education and training**

The Director shall develop programs for public information, education and training to promote basic environment understanding and awareness of and compliance with the provisions of this Act.

**SCHEDULE I**

(Section 2)

**CONTROLLED SUBSTANCES****PART I****Group I - any of the following Chlorofluorocarbons whether new, recycled or in a mixture:**

Chemical Formula	Substance	Ozone Depleting Potential
CFCl <sub>3</sub>	CFC-11	1.0
CF <sub>2</sub> Cl <sub>2</sub>	CFC-12	1.0
C <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub>	CFC-113	0.8
C <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub>	CFC-114	1.0
C <sub>2</sub> F <sub>5</sub> Cl	CFC-115	0.6
CF <sub>3</sub> Cl	CFC-13	1.0
C <sub>2</sub> FCl <sub>5</sub>	CFC-111	1.0
C <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub>	CFC-112	1.0
C <sub>3</sub> FCl <sub>7</sub>	CFC-211	1.0
C <sub>3</sub> F <sub>2</sub> Cl <sub>6</sub>	CFC-212	1.0
C <sub>3</sub> F <sub>3</sub> Cl <sub>5</sub>	CFC-213	1.0
C <sub>3</sub> F <sub>4</sub> Cl <sub>4</sub>	CFC-214	1.0
C <sub>3</sub> F <sub>5</sub> Cl <sub>3</sub>	CFC-215	1.0
C <sub>3</sub> F <sub>6</sub> Cl <sub>2</sub>	CFC-216	1.0
C <sub>3</sub> F <sub>7</sub> Cl	CFC-217	1.0

**Group II - any Bromofluorocarbon or “Halon”, whether new, recycled or in a mixture, including -**

Chemical Formula	Substance	Ozone Depleting Potential
CF <sub>2</sub> BrCl	halon-1211	3.0
CF <sub>3</sub> Br	halon-1301	10.0
C <sub>2</sub> F <sub>4</sub> Br <sub>2</sub>	halon-2402	6.0

**Group III - Carbon tetrachloride, whether new, recycled or in a mixture:**

Chemical Formula	Substance	Ozone Depleting Potential
CCl <sub>4</sub>	carbon tetrachloride	1.1

**Group IV - Methyl chloroform, whether new, recycled or in a mixture:**

Chemical Formula	Substance	Ozone Depleting Potential
C <sub>2</sub> H <sub>3</sub> Cl <sub>3</sub>	1,1,1 trichloroethane*	0.1

(\* This formula does not refer to 1, 1, 2-trichloroethane)

**PART II**

**Group I - HCFCs - any of the following hydrochlorofluorocarbons, whether new, recycled or in a mixture:**

Substance	Chemical Formula	Common Name	Ozone Depleting Potential
Dichlorofluoromethane	CHFC <sub>2</sub>	HCFC-21	0.04
Monochlorodifluoromethane	CHF <sub>2</sub> Cl	HCFC-22	0.055
Monochlorofluoromethane	CH <sub>2</sub> FCl	HCFC-31	0.02
Tetrachlorofluoroethane	C <sub>2</sub> HFCl <sub>4</sub>	HCFC-121	0.01-0.04
Trichlorodifluoroethane	C <sub>2</sub> HF <sub>2</sub> Cl <sub>3</sub>	HCFC-122	0.02-0.08
Dichlorotrifluoroethane	C <sub>2</sub> HF <sub>3</sub> Cl <sub>2</sub>	HCFC-123	0.02-0.06
Monochlorotetrafluoroethane	C <sub>2</sub> HF <sub>4</sub> Cl	HCFC-124	0.02-0.04
Trichlorofluoroethane	C <sub>2</sub> H <sub>2</sub> FCl <sub>3</sub>	HCFC-131	0.007-0.05
Dichlorodifluoroethane	C <sub>2</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>2</sub>	HCFC-132	0.008-0.05
Monochlorotrifluoroethane	C <sub>2</sub> H <sub>2</sub> F <sub>3</sub> Cl	HCFC-133	0.02-0.06
Dichlorofluoroethane	C <sub>2</sub> H <sub>3</sub> FCl <sub>2</sub>	HCFC-141	0.05-0.07
Monochlorodifluoroethane	C <sub>2</sub> H <sub>3</sub> F <sub>2</sub> Cl	HCFC-142	0.008-0.07
Chlorofluoroethane	C <sub>2</sub> H <sub>4</sub> FCl	HCFC-151	0.003-0.005
Hexachlorofluoropropane	C <sub>3</sub> HFCl <sub>6</sub>	HCFC-221	0.015-0.07
Pentachlorodifluoropropane	C <sub>3</sub> HF <sub>2</sub> Cl <sub>5</sub>	HCFC-222	0.01-0.09
Tetrachlorotrifluoropropane	C <sub>3</sub> HF <sub>3</sub> Cl <sub>4</sub>	HCFC-223	0.01-0.08
Trichlorotetrafluoropropane	C <sub>3</sub> HF <sub>4</sub> Cl <sub>3</sub>	HCFC-224	0.01-0.09
Dichloropentafluoropropane	C <sub>3</sub> HF <sub>5</sub> Cl <sub>2</sub>	HCFC-225	0.02-0.07
Monochlorohexafluoropropane	C <sub>3</sub> HF <sub>6</sub> Cl	HCFC-226	0.02-0.1
Pentachlorofluoropropane	C <sub>3</sub> H <sub>2</sub> FCl <sub>5</sub>	HCFC-231	0.05-0.09
Tetrachlorodifluoropropane	C <sub>3</sub> H <sub>2</sub> F <sub>2</sub> Cl <sub>4</sub>	HCFC-232	0.008-0.1
Trichlorotrifluoropropane	C <sub>3</sub> H <sub>2</sub> F <sub>3</sub> Cl <sub>3</sub>	HCFC-233	0.007-0.23
Dichlorotetrafluoropropane	C <sub>3</sub> H <sub>2</sub> F <sub>4</sub> Cl <sub>2</sub>	HCFC-234	0.01-0.28

Monochloropentafluoropropane	$C_3H_2F_5Cl$	HCFC-235	0.03-0.52
Tetrachlorofluoropropane	$C_3H_3FCl_4$	HCFC-241	0.004-0.09
Trichlorodifluoropropane	$C_3H_3F_2Cl_3$	HCFC-242	0.005-0.13
Dichlorotrifluoropropane	$C_3H_3F_3Cl_2$	HCFC-243	0.007-0.12
Monochlorotetrafluoropropane	$C_3H_3F_4Cl$	HCFC-244	0.009-0.14
Trichlorofluoropropane	$C_3H_4FCl_3$	HCFC-251	0.001-0.01
Dichlorodifluoropropane	$C_3H_4F_2Cl_2$	HCFC-252	0.005-0.04
Monochlorotrifluoropropane	$C_3H_4F_3Cl$	HCFC-253	0.003-0.03
Dichlorofluoropropane	$C_3H_5FCl_2$	HCFC-261	0.002-0.02
Monochlorodifluoropropane	$C_3H_5F_2Cl$	HCFC-262	0.002-0.02
Monochlorofluoropropane	$C_3H_6FCl$	HCFC-271	0.001-0.03

**Group II**

<b>Substance</b>	<b>Chemical Formula</b>	<b>Common Name</b>	<b>Ozone Depleting Potential</b>
Methyl bromide	$CH_3Br$	MBr	0.7

## **Schedule II**

### **List of prohibited wastes and other matter**

1. Organohalogen compounds;
2. Mercury and mercury compounds;
3. Cadmium and cadmium compounds;
4. Persistent plastics and other persistent synthetic material, including netting and ropes, which may remain in suspension in the sea in such a manner as to:
  - (a) interfere materially with fishing, navigation and other legitimate uses of the sea; or
  - (b) present a risk to the health or safety of any living marine resource;
5. Crude oil and its wastes, refined petroleum products, petroleum distillate residues, lubricating oils, hydraulic fluids and any mixtures containing any of these substances;
6. High-level radioactive wastes and other high-level radioactive matter;
7. Materials in whatever form, whether solids, liquids, semi-liquids, gases, or in a living state, that are, have been produced, or are intended for biological or chemical warfare;
8. Organophosphorous compounds, unless these substances, other than substances intended for biological or chemical warfare, are trace contaminants in sewage sludge or dredge spoils, or are rapidly rendered harmless by physical, chemical, or biological processes in the sea, provided they do not:
  - (a) make edible marine organisms unpalatable; or
  - (b) endanger human health or that of marine biota.



**Schedule III**  
**Waste and other matter requiring special permit for dumping**

1. Wastes or other matter containing a significant amount of
  - (a) arsenic and its compounds;
  - (b) lead and its compounds;
  - (c) copper and its compounds;
  - (d) zinc and its compounds;
  - (e) organosilicon compounds;
  - (f) cyanides;
  - (g) fluorides;
  - (h) pesticides and their by-products other than as set out in Schedule II
2. Acids and alkalis containing the following substances:
  - (a) beryllium and its compounds;
  - (b) chromium and its compounds;
  - (c) nickel and its compounds;
  - (d) vanadium and its compounds
3. Containers, scrap metal and other bulky wastes that are liable to sink to the sea bottom which may present a serious obstacle to fishing or navigation
4. Substances which, though of a non-toxic nature, may become harmful due to the quantities in which they are dumped, or which are liable to seriously reduce amenities or present a risk to human health or marine biota
5. Radio-active wastes and other radio-active matter not included in Schedule II
6. Incinerated wastes of any matter

## **SCHEDULE IV**

### **Water quality management criteria and guidelines**

#### **Part 1 - Water Quality Policy**

The following water quality management standards and guidelines should be provided in any Policy on Water Quality Management formulated under the provision of this Act:

(1) the achievement of water quality objectives in Antigua and Barbuda is in the public interest, and the achievement of these objectives should not represent an unreasonable barrier to economic or social development;

(2) existing water uses and the level of water quality necessary to protect existing water uses shall, as a minimum, be maintained and protected;

(3) no further water quality degradation, which would interfere with or become injurious to existing water uses, shall be permitted;

(4) waters whose existing quality is less than the quality specified in standards contained in this Schedule shall be improved to comply with these standards;

(5) waters whose existing quality exceeds levels necessary to support propagation of fish, shellfish, and wildlife and recreation in and on the water shall be maintained and protected unless and until it is found after full opportunity for public participation and intergovernmental co-ordination, that allowing lower water quality is necessary to accommodate an important economic or social development in the area in which the waters are located, subject to the provision that in no event, however, may degradation of water quality interfere with or become injurious to existing uses;

(6) before any new point source or non-point source of pollution lowers the water quality in any area, the person responsible for such pollution shall establish and use at least the most cost-effective and reasonable environment management practices to address such pollution;

(7) to the extent practicable, all new point sources of pollution shall not discharge into near-shore or fresh surface waters;

(8) all sewage and waste shall receive the degree of treatment necessary to protect the beneficial uses of waters of the Republic of Antigua and Barbuda before discharge;

(9) in no event shall there be a degradation of water quality which shall cause the water quality in any area to fall below that necessary to protect the uses of the water for the propagation of aquatic life and for recreation in and on the water and to protect human health;

(10) outstanding national resource waters shall be protected in a pristine state;

(11) all waste water from industrial or commercial facilities that are located close to a public sewerage system should be disposed into that system, subject to such quality and flow conditions as the owner of the sewerage system may apply;

(12) there shall be no direct or indirect discharge of sewage or other waste into any planned or intended ground or surface source of public drinking water;

(13) no new industrial or commercial facilities will be permitted in any Class I Groundwater area;

(14) in cases where the water quality falls below of what is necessary to protect human health, the person that caused the pollution shall pay for any cost necessary to inform the public of the risks involved, in order to protect human health;

(15) where more than one person is responsible for causing a level of a substance in a water body to exceed a water quality standard or guideline, those persons may agree amongst themselves on the manner to reduce individual contributions to meet the standard or guideline mentioned in this schedule; if they cannot agree within a reasonable time frame amongst themselves, the Department of Environment may require a reduction to be achieved by each person based on what is assumed, by the Department, to be reasonable in the circumstances;

(16) the Department of Environment shall apply a precautionary approach, whenever necessary, to ensure that future developments are not endangered or in case the water body requires a high degree of protection;

(17) a point source or a non-point source of a water pollutant should not, in isolation or combination with any other source(s) of that pollutant, cause a condition to exceed the water quality guidelines mentioned in this Schedule;

(18) a point source or a non-point source of a water pollutant shall not, in isolation or combination with any other source(s) of that pollutant, cause a condition to exceed the water quality standards mentioned in this Schedule;

(19) in order to meet the water quality guidelines and standards in receiving waters mentioned in this Schedule, the concentration of a substance in a point source discharge shall not exceed that water quality guideline or standard, or shall not exceed, after approval by the Department of Environment any stated concentration (mg/l) calculated by using:

- (a) the relevant modelling protocol contained in Dilution Models for Effluent Discharges (U.S. Environment Protection Agency, Office of Resources &

Development. EPA/600/R-94/086), or other equivalent model approved by the Department of Environment;

- (b) background concentration(s);
- (c) discharge volume and density; and
- (d) any other relevant data or criteria as specified in the models listed in paragraph (a).

## **Part 2 - Water Use Classification and Criteria**

The following water use classifications and criteria should be provided in any quality management standards and guidelines contained in the Policy on Water Quality Management formulated under the provision of this Act:

**Coastal Waters** are classified in accordance with uses to be protected in each class as follows:

(a) *Class AA Waters*

- (i) the uses to be protected in this class of water are oceanographic research, the support and propagation of shellfish and other marine life, conservation of coral reefs and wilderness areas, compatible recreation and other aesthetic enjoyment;
- (ii) it is the objective that this class of waters remain as near to their natural state as possible with an absolute minimum of pollution from any source;
- (iii) to the extent possible, the wilderness character of such areas shall be protected;
- (iv) no point source discharge will be permitted in these waters, nor will destruction of reefs, aquatic habitats or other resources be permitted;
- (v) the classification of any water areas as Class AA shall not preclude other uses of such waters compatible with these objectives and in conformance with the standards applicable to them;

(b) *Class A Waters*

- (i) the uses to be protected in this class of waters are recreational (including swimming, bathing, and other water contact sports), aesthetic enjoyment, and the support and propagation of aquatic life;

- (ii) it is the objective that this class of waters be used for recreational purposes and aesthetic enjoyment shall not be limited in any way;
  - (iii) Class A waters shall be kept clean of any trash, solid materials or oil, and shall not act as receiving waters for any effluent which has not received the highest degree of treatment or control practicable under existing technological and economic conditions and shall be compatible with the standards established for this class;
- (c) Class B Waters
- (i) waters within such areas are to be used for ports, small boat harbours, industrial activities, mining, commercial and industrial shipping, compatible recreation, the support and propagation of aquatic life, and aesthetic enjoyment;
  - (ii) it is the objective for this class of water that discharge of any pollutant be controlled to the maximum extent possible and that sewage and industrial effluent receive the highest degree of treatment practicable under existing technological and economic conditions, and shall be compatible with the standards established for this class;
  - (iii) the Class B designation should apply only to a limited area next to commercial or industrial facilities, and the rest of the water area in such bay or harbour shall be Class A unless given some other specific designation;

**Fresh Waters** are classified in accordance with the uses to be protected as follows:

(a) *Class 1 Waters*

- (i) the uses to be protected in this class of waters are drinking water supply, food processing, the support and propagation of aquatic life, and compatible recreation;
- (ii) it is the objective that this class of waters remain in as near their natural state as possible with an absolute minimum of pollution from any source;
- (iii) to the extent possible, the natural character of such areas shall be protected;
- (iv) waste discharge into these waters is prohibited;

(b) *Class 2 Waters*

- (i) the uses to be protected in this class of waters are bathing, swimming, the support and propagation of aquatic life, compatible recreation, and agricultural water supply;
  - (ii) it is the objective for this class of waters that their use for recreational purposes, propagation of fish and other aquatic life and agricultural and industrial water supply shall not be limited in any way;
  - (iii) Class 2 waters shall be kept clean of trash, solid waste materials and oils and shall not act as receiving waters for any effluent which has not received the highest degree of treatment or control practicable under existing technological and economic conditions, and shall be compatible with the standards established for this class;
- (c) *Class 3 Waters*
- (i) the uses to be protected in this class of waters are industrial activities, mining, compatible recreation, the support and propagation of aquatic life, and aesthetic enjoyment;
  - (ii) it is the objective for this class of waters that discharge of any pollutant be controlled to the maximum extent possible and that sewage and industrial effluent receive the highest degree of treatment practicable under existing technological and economic conditions, and shall be compatible with the standards established for this class;

(3) **Ground waters** are classified in accordance with the uses to be protected as follows:

- (a) *Class I Ground waters* - special ground waters are those that are highly vulnerable to contamination because of the hydrological characteristics of the areas under which they occur and that are also characterised by either of the following two factors:
  - (i) irreplaceable in that no reasonable alternative source of drinking water is available to substantial current or future populations, or
  - (ii) ecologically vital in that the aquifer provides the base flow for a particularly sensitive ecological system that if polluted would destroy a unique habitat;
- (b) *Class II Ground waters* - current and potential sources of drinking water and waters having other beneficial uses are all other ground waters that are currently used or are potentially available for drinking water or other beneficial use;

- (c) *Class III Ground waters* - are not considered potential sources of drinking water and are of limited beneficial uses; these are ground waters that are heavily saline with total dissolved solids levels over 10,000 mg/l, or which are otherwise contaminated beyond levels that allow clean-up using methods reasonably employed in public water system treatment; these ground waters must not migrate to Class I or II Ground waters or have a discharge to surface water that could cause degradation;

### **Part 3 - Water Quality Standards**

The following water quality standards should be provided in any Policy on Water Quality Management formulated under the provision of this Act:

#### **(1) Basic standards applicable to all waters**

All waters shall be capable of supporting desirable aquatic life and shall be suitable for recreation in and on the water.

- (a) In furtherance of the goal mentioned under paragraph (a), all waters shall be:
- (i) free of visible floating materials, oils, greases, scum and other floating matter attributable to human activities; concentrations of oils and greases shall not exceed 10 mg/l in all waters; no oil or grease deposits shall occur;
  - (ii) free from materials attributable to sewage, industrial waste or other human activities that produce visible turbidity, or settle out to form deposits;
  - (iii) free from materials attributable to sewage, industrial waste or other human activities that produce objectionable colour, odour or taste directly or by chemical or biological action with the water or the life forms in the water;
  - (iv) free from substances attributable to human activities that induce undesirable aquatic life or degrade the indigenous biota;
  - (v) free of dangerous objects attributable to human activities;

maintained free of toxic substances in concentrations that are toxic to or that produce detrimental physiological responses in human, plant, animal, or aquatic life — compliance with this objective will be determined by use of indicator organisms, analysis of species diversity, population density, growth anomalies, bioassay of appropriate duration or other appropriate methods as specified by the Department of Environment; calculated on the basis that the survival of aquatic life in waters subjected to waste discharge or other controllable water quality factors shall not be less than that for the same water body in areas unaffected by the waste discharge, or when necessary for other control water that is consistent with the requirements for "experimental water" as described in the

latest edition of Standard Methods for the Examination of Water and Wastewater (American Public Health Association), or methods specified by the Department of Environment and as a minimum, compliance with this objective shall be evaluated with a ninety-six (96) hour bioassay.

- (b) The Department of Environment shall apply background levels in place of specified water quality standards or guidelines if background water quality is higher than that specified in other provisions of the standards in order to preserve the water quality found in the present state to prevent the degradation of present conditions and implement the anti-degradation provisions mentioned under Part 1. - Water Quality Policy.

**Specific water quality standards and guidelines — classes of water to which criteria apply**

(a) Microbiological Requirement

- (i) The median total coliform bacteria count shall not exceed 70/100 ml for any 10 consecutive samples nor shall any single sample exceed 230/100 ml.

Class AA, 1

- (ii) No sample shall contain any faecal coli forms in 100 ml. Class 1
- (iii) Faecal coliform count shall not exceed a geometric mean of 200/100 ml for any 10 consecutive samples nor shall any single sample exceed 400/100 ml. Class A, B, 2, 3
- (iv) Enterococci count shall not exceed a geometric mean of 33/100 ml for any 5 samples in a given 30 day period; no single sample shall exceed 60/100 ml. Class AA, A
- (v) In areas where shellfish are harvested for human consumption the microbiological standards under (i) shall apply. Class A, B, 2, 3

(b) pH Units

- (i) pH variation shall be with 7.7 and 8.5 units. Class AA, A, B
- (ii) pH variation shall not be greater than 0.2 pH units from natural conditions: but not lower than a pH 6.5 or higher than a pH of 8.5 from other than natural causes. Class 1



- (iii) pH variation shall not be greater than 0.5 pH units from natural conditions: but not lower than a pH of 6.5 or higher than a pH of 8.5 from other than natural causes. Class 2
  - (iv) pH variation shall not be greater than 0.5 pH units from natural conditions: but not lower than a pH of 6.5 or higher than a pH of 9.0 from other than natural causes. Class 3
- (c) Nutrient Availability
- (i) The ratio of total nitrogen to total phosphorus concentration shall be within: 11.1 - 27.1 Class AA, A 6.1 - 18.1 Class B 10% variation of the naturally occurring ratio. Class 1,2
  - (ii) The concentration of total nitrogen and total phosphorus shall not vary by more than 10% from the natural conditions All Water
  - (iii) Except for concentrations attributable to natural causes nutrient concentration shall not exceed:

for total Phosphorus:

- (A) 0.025 mg/l as P Class AA, A
- (B) 0.500 mg/l as P Class B,
- (C) 0.200 mg/l as P Class 1, 2, 3

and for total Nitrogen:

- (A) 0.400 mg/l Class AA, A
- (B) 0.800 mg/l Class B
- (C) 0.750 mg/l Class 1
- (D) 1.500 mg/l Class 2, 3ju

- (iv) To support coral reef growth the yearly average primary productivity of plankton should not exceed 100 mg of carbon per square meter per day. Class AA, A

(d) Dissolved Oxygen

- (i) Dissolved oxygen concentrations shall not vary by more than 25% from natural conditions. Class AA, A, 1, 2
- (ii) Except for concentrations attributable to natural causes dissolved oxygen concentration shall not be less than:

(A) the greater of 6.0 mg/l, 75% or saturation. Class AA, 1

(B) 5.0 mg/l. Class A, 2

(C) 4.5 mg/l Class B, 3

(d) Salinity

- (i) Salinity changes shall be less than 5% from natural background levels. Class AA, A, B
- (ii) The salinity shall not be permitted to increase above 1,000 mg/l or the conductivity shall not be permitted to increase above 1,500 mS/cm. Class 1, 2, 3

(e) Temperature shall not vary by more than 2 degree Celsius from the natural conditions in marine and fresh waters. All Waters

(f) Turbidity as measured by Nephelometric Turbidity Units (NTU) shall not be:

- (i) greater than 5% above natural conditions Class AA, 1
- (ii) greater than 10% above natural conditions. Class A, B, 2, 3

(g) Light penetration:

- (i) In fresh waters that are deeper than 0.5 times the natural euphotic depth, the euphotic depth (Zeu) shall not vary by more than 10% from the natural euphotic depth; Class 1, 2, 3

- (ii) In fresh waters shallower than 0.5 times the natural euphotic depth, the maximum reduction in light at the sediment bed shall not exceed 20%, to protect the light climate of benthic plants; Class 1, 2, 3
  - (ii) In marine waters, the euphotic depth shall not vary by more than 10% from the natural euphotic depth; Class AA, A, B
- (h) Radioactive Materials:
- (i) The concentration of radioactive materials in water shall not exceed 1/30th of the maximum in the U.S. National Bureau of Standards Handbook No. 69. All Waters
  - (ii) Gross alpha activity shall not exceed 0.1 Bq/l and gross beta activity shall not exceed 1 Bq/l. All Waters
  - (iii) The concentration of radioactive materials in water shall not result in the accumulation of radioactivity in plants or animals that would result in a hazard to humans or aquatic life. All Waters
- (i) Oil and Petroleum Products

The concentration of oil and petroleum products shall not:

- (i) Be detectable as a visible film sheen or discoloration of the surface or cause an objectionable odour. All Waters
  - (ii) Cause tainting of fish or other aquatic life, be injurious to the indigenous biota or cause an objectionable taste in drinking water. All Waters
  - (iii) Form an oil deposit on beaches or shorelines or on the bottom of a body of water. All Waters
- (j) Toxic substances

Concentrations of toxic substances shall not exceed:

- (i) natural background levels. Class AA, 1
- (ii) levels to protect swimmers from harmful effects through ingestion as described in the column marked "Swimming Water" contained in Table 1 below.

- (iii) levels to protect people from harmful effects through ingestion as described in the column marked "Drinking Water" contained in Table 1 below.

Class 1

- (iv) levels for the protection of aquatic life in coastal waters and human consumers of fish and other aquatic organisms as described in the column marked "Marine Chronic" in Table 1 below Class A, B
- (iv) levels for the protection of aquatic life in fresh waters and human consumers of fish and other aquatic organisms as described in the column marked "Freshwater Chronic" in Table 1 below Class 2, 3
- (v) levels for the protection aesthetic qualities of Recreational Waters as described **in the column marked "Aesthetic qualities" in Table 1 below Class A, 2**

**(3) Specific Water Quality Standards to protect other water uses**

In order to determine the water quality to protect raw drinking water supply or agricultural or industrial water uses, the Australian Water Quality Guidelines for Fresh and Marine Waters (Australian and New Zealand Environment and Conservation Council, November 1992), may be used.

**(4) General conditions**

All methods of sample collection, preservation, and analysis used to determine compliance with these standards shall be in accordance with those specified in the latest edition of Standard Methods for the Examination of Water and Wastewater (American Public Health Association), or methods specified by the Department of Environment, as appropriate. Samples should be collected at approximately equal intervals and under those conditions of tide, rainfall, and time of day when pollution is most likely to be the greatest or at a maximum level.

- (a) Whenever water quality standards are exceeded, samples shall be taken at frequent intervals to be determined by the Department of Environment according to the severity of the violation.
- (b) Whenever a background condition is of a higher quality than an assigned water quality standard or guideline, the background condition shall constitute the water quality standard or guideline.

- (c) Whenever a natural background condition is of a lower quality than an assigned water quality standard or guideline, the natural background condition shall constitute the water quality standard or guideline.
- (d) Whenever two numeric standards are in conflict, the more stringent standard shall constitute the water quality standard.
- (e) Whenever two numeric guidelines are in conflict, the more stringent guideline shall constitute the water quality standard.
- (f) Pollutant discharge to either surface or ground waters shall be controlled so as to protect not only the receiving water but also those waters into which the receiving waters may flow.
- (g) The water quality standards or guidelines shall apply within a mixing zone unless specific alternative standards or guidelines have been approved by the Department of Environment. Mixing zones will only be granted in cases where the costs, of:
  - (i) any appropriate process integrated measure(s);
  - (ii) any appropriate end of pipe measure(s), are unreasonably high.
  - (iii) The following equation shall be used to calculate concentration after initial dilution:

$$C_f = \frac{C_e + C_b (DI)}{DI + 1}$$

$$DI + 1)$$

(Cf = Concentration after mixing

Ce = Effluent concentration (instantaneous maximum)

Cb = Background concentration

DI = Dilution Ratio).

The mixing zone shall be defined under those conditions of tide, wind, runoff, density stratification and discharge that would result in the minimum dilution.

The Department of Environment can establish additional quality standards for substances within a mixing zone.

The Department of Environment can establish sampling protocols for the determination of any natural background condition.

**Table 1 - Water quality standards to protect human health, aquatic life and aesthetic qualities**

		<b>Inorganics (con't)</b>				
		<b><i>Beryllium</i></b>	<b><i>Boron</i></b>	<b><i>Cadmium</i></b>	<b><i>Chlorine (total residual)</i></b>	<b><i>Chromium</i></b>
<b>Pollutant mg/l</b> Drinking Water	(the average of samples taken on 4 consecutive days shall not exceed)	No adequate data to permit recommendation of a health-based guideline value	0.3	0.003	-	0.05
<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	-	-	0.004	0.019	-
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	0.0001	-	0.0002**	0.011	-
<b>Freshwater</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	-	-	0.043	0.013	-
<b>Marine</b> Acute	(not to exceed for each sample taken)	0.0001	-	0.002	0.0075	-
<b>Marine</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	-	1.0	0.005	-	0.05

		<b>Inorganics (con't)</b>					
		<i>Chromium (VI)</i>	<i>Chromium (III)</i>	<i>Copper</i>	<i>Total Cyanide</i>	<i>Free Cyanide</i>	<i>Fluoride</i>
<b>Pollutant</b> mg/l Drinking Water	(the average of samples taken on 4 consecutive days shall not exceed)	-	-	2	0.07	-	1.5
<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	0.016	1.7#	0.018#	-	0.022	-
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	0.01	0.21#	0.002**	-	0.005	-
<b>Freshwater</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	1.1	-	0.003	-	0.001	-
<b>Marine</b> Acute	(not to exceed for each sample taken)	0.05	-	0.005	-	0.005	-
<b>Marine</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	-	-	2	0.1	-	1.5



		<b>Inorganics (con't)</b>					
		<i>Iron</i>	<i>Lead</i>	<i>Mang- anese</i>	<i>Mercury (Total)</i>	<i>Molybdenum</i>	<i>Nickel</i>
<b>Pollutant mg/l</b> Drinking Water	(the average of samples taken on 4 consecutive days shall not exceed)	-	0.01	0.5	0.001	0.07	0.02
<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	-	0.082#	-	0.002	-	1.4#
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	1.0@@	0.001**	0.1	0.0001	-	0.015**
<b>Freshwater</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	-	0.14	-	0.002	-	0.075
<b>Marine</b> Acute	(not to exceed for each sample taken)	-	0.005	0.1	0.0001	-	0.015

<b>Marine Chronic</b>	(the average of samples taken on 4 consecutive days shall not exceed)	-	0.05	0.5	0.001	0.07	0.1
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		<b>Inorganics</b>					
		<i>Nitrate</i>	<i>Nitrite</i>	<i>The sum of the ratio of the concentration of each (Nitrate and Nitrite) to its respective guideline value</i>	<i>Selenium</i>	<i>Selenium (IV, Selenite)</i>	<i>Silver</i>
<b>Pollutant mg/l</b> Drinking Water	(the average of samples taken on 4 consecutive days shall not exceed)	50	3	-	0.01	0.01	0.1
<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	-	-	16.4	-	1.2	0.004#
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	-	-	0.02	0.005	0.00002	0.0001

<b>Freshwater Chronic</b>	(the average of samples taken on 4 consecutive days shall not exceed)	-	-	-	-	2.4	0.0023
<b>Marine Acute</b>	(not to exceed for each sample taken)	-	-	-	0.07	0.00002	0.001
<b>Marine Chronic</b>	(the average of samples taken on 4 consecutive days shall not exceed)	50	3	-	0.01	0.05	0.1

		<b>Inorganics</b>					
		<i>Nitrate</i>	<i>Nitrite</i>	<i>The sum of the ratio of the concentration of each (Nitrate and Nitrite) to its respective guideline value</i>	<i>Selenium</i>	<i>Selenium (IV, selenite)</i>	<i>Silver</i>
<b>Pollutant mg/l Drinking Water</b>	(the average of samples taken on 4 consecutive days shall not exceed)	50	3	1	0.01	-	0.1

<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	-	-	-	-	0.26	0.004#
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	-	-	-	0.005	0.035	0.0001
<b>Freshwater</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	-	-	-	-	0.41	0.0023
<b>Marine</b> Acute	(not to exceed for each sample taken)	-	-	-	0.07	0.054	0.001
<b>Marine</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	50	3	1	0.01	-	0.1

		<b>Inorganics</b>			
		<i>Sulphate</i>	<i>Sulphide</i>	<i>Uranium</i>	<i>Zinc</i>
<b>Pollutant mg/l</b> Drinking Water	(the average of samples taken on 4 consecutive days shall not exceed)	500	0.05	0.14	-
<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	-	-	-	0.12#
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	-	0.002	-	0.005@@
<b>Freshwater</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	-	-	-	0.095
<b>Marine</b> Acute	(not to exceed for each sample taken)	-	0.002	-	0.05
<b>Marine</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	500	0.05	0.14	-

		<b>Organics</b>				
		<i>Pesticides</i>	<i>Benzene</i>	<i>DDT</i>	<i>Dieldrin</i>	<i>Malathion</i>
<b>Pollutant mg/l</b> Drinking Water	(the average of samples taken on 4 consecutive days shall not exceed)	0.1	0.005	-	-	-
<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	-	5.3	0.001	0.0025	-
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	-	0.04	0.00000003	0.00000008	0.0001
<b>Freshwater</b> Chronic	(the average of samples taken on 4 consecutive days shall not exceed)	-	5.1	0.0001	0.0007	-
<b>Marine</b> Acute	(not to exceed for each sample taken)	-	0.04	0.00000003	0.00000008	0.0001

<b>Marine Chronic</b>	(the average of samples taken on 4 consecutive days shall not exceed)	0.1	0.01	-	-	-
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		<b>Organics</b>				
		<i>Parathion</i>	<i>PCB's</i>	<i>Phenols</i>	<i>2,3,7,8-tetrachloro-dibenzo-dioxin</i>	<i>Tributyltin oxide</i>
<b>Pollutant mg/l</b> Drinking Water	(the average of samples taken on 4 consecutive days shall not exceed)	-	0.0001	0.002	-	0.002
<b>Aquatic life</b> Swimming Water	(not to exceed for each sample taken)	0.000065	0.002	10.2	-	-
<b>Freshwater</b> Acute	(not to exceed for each sample taken)	0.000013	0.000001	0.05	0.00001 ng/l	0.000008

<b>Freshwater Chronic</b>	(the average of samples taken on 4 consecutive days shall not exceed)	-	0.01	5.8	-	-
<b>Marine Acute</b>	(not to exceed for each sample taken)	-	0.000004	0.05	-	0.000002
<b>Marine Chronic</b>	(the average of samples taken on 4 consecutive days shall not exceed)	-	0.0001	0.002	-	0.002

\* Assumes water temperature of 25 degrees Celsius and pH 7.

\*\* Depends upon hardness of water.

\* Assumes water temperature of 25 degrees Celsius and pH 7.

\*\* Depends upon hardness of water.

# Assumes water hardness 100 mg/l CaCO<sub>3</sub>.

@ Assumes pH > 6.5.

@@ Provided iron is not present as Fe (II).

Acute standards are designed to protect against acute effects (e.g., death) resulting from spikes in pollutant concentrations.

Chronic standards are designed to protect against sub-lethal effects occurring from elevated pollutant concentrations over a longer (4-day period).

The standards from Table 1 are derived from the following sources in order of decreasing priority: World Health Organisation (WHO) Guidelines for Drinking-Water Quality; Australian and New



Zealand Environment and Conservation Council (ANZECC) Guidelines for Raw Waters for Drinking Purposes, Protection of Human Consumers of Fish and other Aquatic Organisms, and Protection of Aquatic Ecosystems contained in Australian Water Quality Guidelines for Fresh and Marine Waters; Recommended National Environment Quality Criteria for Antigua and Barbuda, contained in Recommended National Environment Quality Criteria, Government of Antigua and Barbuda; United States Environment Protection Agency (USEPA) Quality Criteria for Water.

## **SCHEDULE V AIR QUALITY CRITERIA**

### **Part 1 – General**

1. In order to meet the emission guidelines and standards mentioned in Parts 2 or 5 of this Schedule, a point source of a substance shall not exceed a specified concentration (mg/Nm<sup>3</sup>).

2. A point source or a non-point source of an air polluting substance should not, in isolation or combination with any other source(s) of that substance, cause a concentration of that substance in the ambient air around any premises used primarily for residential purposes to exceed the air quality guidelines mentioned in Part 3 of this Schedule.

3. A point source or a non-point source of an air polluting substance shall not, in isolation or combination with any other source(s) of that substance, cause a concentration of that substance in the ambient air around any premises used primarily for residential purposes to exceed the air quality standards mentioned in Part 4 of this Schedule.

4. In order to meet the air quality guidelines and standards mentioned in Part 3 and Part 4 of this Schedule, the concentration of a substance in a point source discharge shall not exceed any stated concentration (mg/Nm<sup>3</sup>) calculated by using:

the relevant modelling protocol contained in *Industrial Source Complex (ISC3) Dispersion Models* (United States Environment Protection Agency, Office of Air Quality Planning and Standards, Emissions, Monitoring, and Analysis Division, USEPA-454/B-95-003a), or other equivalent model approved by the Department of Environment;  
surface meteorological data from an appropriate source;  
mixing height data from an appropriate source;  
discharge temperature and volume data;  
the height of discharge; and

any other relevant data or criteria as specified in the models listed in paragraph (a).

5. Where more than one person is responsible for causing the discharge of a substance in the ambient air around any premises used primarily for residential purposes such as to exceed any specified air quality criteria, those persons may agree amongst themselves on the manner to reduce individual contributions such as to meet the criteria mentioned under Part 3 and Part 4 of this Schedule. If they cannot agree within a reasonable time frame amongst themselves, the Department of Environment may require a reduction to be achieved by each person based on what is assumed, by the Department, to be reasonable in the circumstances.

6. Commercial or industrial facilities shall regularly monitor exhaust discharge points, and for this purpose shall use such monitoring protocols as may be specified by, where appropriate:

the Department of Environment;  
the facility's Code of Environmental practice; or  
Regulations under this Act.

## **Part 2 - Classification of substances and emission guidelines and standards**

Substances are classified in Tables 1 and 2 in the following categories according to toxic, persistent and carcinogenic qualities:

### *Category 1 - Environmentally Toxic and Persistent or Carcinogenic Substances*

The best available technical means avoiding unreasonably high costs shall be utilised to reduce the exhaust of these substances. The concentration of solid substances in this category shall not exceed 2.5 mg/Nm<sup>3</sup> at the point of the exhaust. The concentration of a gas, vapour or haze of a substance in this category should not exceed the MAC-value specified in Table 2 at the point of the exhaust.

### *Category 2 - Environmentally Toxic and Non-Persistent Substances*

The best practicable means should be utilised to reduce the exhaust of these substances. Reducing the effects of this exhaust to an acceptable level by dispersion may be necessary in cases where the exhaust concentrations are high. The concentration of solid substances in this category should not exceed 25 mg/Nm<sup>3</sup> at the point of the exhaust. The concentration of a gas, vapour or haze of a substance in this category should, if exhausted at roof level, not exceed ten times the MAC-value specified in Table 2 at the point of the exhaust.

### *Category 3 - Mildly Toxic but Environmentally Persistent Substances*

The best practicable means should be utilised to reduce the exhaust of these substances. Reducing the effects of this exhaust to an acceptable level by dispersion may be necessary in cases where the exhausted concentrations are high. The concentration of solid substances in this category should not exceed 75 mg/Nm<sup>3</sup> at the point of the exhaust. The concentration a gas, vapour or haze of a substance in this category should, if exhausted at roof level, not exceed ten times the MAC-value specified in Table 2 at the point of the exhaust.

### *Category 4 - Non-Toxic and Non-Persistent Substances*

The best practicable means should be utilised to reduce the exhaust of these substances. Reducing the effects of this exhaust to an acceptable level by dispersion may be necessary in cases where the exhausted concentrations are high. To prevent nuisance, the concentration of solid substances in this category should not exceed 100 mg/Nm<sup>3</sup> at the point of the exhaust. The concentration of gas, vapour or haze of a substance in this category should, if exhausted at roof level, not exceed ten times the MAC-value specified in Table 2 at the point of the exhaust.

### **Part 3 - Air Quality Guidelines**

1. The concentration of a substance, in the ambient air, around any premises used primarily for residential purposes, should, for the 95 percentile of all daily mean values taken throughout the year, not exceed the air quality guideline for that substance mentioned in Table 1 or Table 2.

2. Where a gas, vapour or haze substance is not mentioned in Table 2, the concentration of that substance, in the ambient air, around any premises used primarily for residential purposes, should, for the 95 percentile of all daily mean values taken throughout the year, not exceed:

- (a) category 1: 0.001x MAC-value,
- (b) category 2: 0.01 x MAC-value,
- (c) category 3 and 4: 0.03 x MAC-value.

If the scent limit is lower than the limit based on the MAC-value than an air quality criteria of 0.3 x the scent limit should be used.

3. Where a solid substance is not mentioned in Table 1, the concentration of that substance, in the ambient air, around any premises used primarily for residential purposes, should, for the 95 percentile of all daily mean values taken throughout the year, not exceed:

- (a) category 1: 0.001 mg/m<sup>3</sup>,
- (b) category 2: 0.01 mg/m<sup>3</sup>,
- (c) category 3 and 4: 0.03 mg/m<sup>3</sup>.

If the scent limit is lower than the above-mentioned limit than an air quality criteria of 0.3 x the scent limit should be used.

4. The concentration of inert dust in the ambient air around any premises used primarily for residential purposes, should, for the 95 percentile of all daily mean values taken throughout the year, not exceed 0.075 mg/m<sup>3</sup>.

Raising a chimney to meet the guidelines under this Part shall only be allowed in cases where the costs of any:

- (a) appropriate process integrated measure(s);  
appropriate end of pipe measure(s),  
are unreasonably high.

**Part 4 - Air Quality Standards**

1. The MAC-values in Table 2 are to be regarded as minimum standards required for the protection of human health in the workplace, and discharges affecting ambient air around any premises used primarily for residential purposes shall meet higher standards.

2. The average concentration over a continuous 8 hour period, of a gas, vapour or haze of a substance in the ambient air around any premises used primarily for residential purposes, shall not exceed the MAC-value mentioned in Table 2.

3. The average concentration over a continuous 24 hour period, of particulate matter, in the ambient air around any premises used primarily for residential purposes, shall not exceed 0.15 mg/m<sup>3</sup>.

4. The average concentration over a continuous 24 hour period, of sulphur dioxide, in the ambient air, around any premises used primarily for residential purposes, shall not exceed 0.365 mg/m<sup>3</sup>.

5. The average concentration over a continuous 1 hour period, of sulphur dioxide, in the ambient air, around any premises used primarily for residential purposes, shall not exceed 0.35 mg/m<sup>3</sup>.

6. The average concentration over a continuous 1 hour period, of nitrogen dioxide, in the ambient air, around any premises used primarily for residential purposes, shall not exceed 0.32 mg/m<sup>3</sup>.

7. The average concentration over a continuous 1 hour period, of carbon monoxide, in the ambient air, around any premises used primarily for residential purposes, shall not exceed 29 mg/m<sup>3</sup>.

8. Raising a chimney to meet the guidelines under this Part shall only be allowed in cases where the costs of any:

- (a) appropriate process integrated measure(s);
- appropriate end of pipe measure(s),
- are unreasonably high.

**Part 5 - Emission Standards (Dioxins and Furans and other Substances)**

1 The sum concentrations of:

- (a) 2,3,7,8-Tetrachlorodibenzo-P-Dioxin,

- (b) 1,2,3,7,8-Pentachlorodibenzo-P-Dioxin,
- (c) 1,2,3,6,7,8-Hexachlorodibenzo-P-Dioxin,
- (d) 1,2,3,7,8,9-Hexachlorodibenzo-P-Dioxin,
- (e) 1,2,3,4,7,8-Hexachlorodibenzo-P-Dioxin,
- (f) 2,3,7,8-Tetrachlorodibenzofuran,
- (g) 2,3,4,7,8-Pentachlorodibenzofuran,
- (h) and 1,2,3,6,7,8-Hexachlorodibenzofuran

shall not exceed, at the point of the exhaust, 0.5 nanograms/Nm<sup>3</sup> in any emission from a commercial or industrial facility.

2. The concentration of any Category 1 solid substances listed in Table 1 shall not exceed 2.5 mg/Nm<sup>3</sup> at the point of the exhaust.

**Table 1 - Solid substances**

Substance	Category	Air quality guideline mg/m <sup>3</sup>
Ammonium compounds	3	0.03
Antimony compounds	2	0.01
Arsenic compounds	1	0.001
Asbestos	1	0.001
Bariumsulfate	3	0.03
(Other) Barium compounds	2	0.01
Bitumen	3	0.03
Bone-meal	2	0.01
Cadmium	1	0.001

Calcium hydroxide	3	0.03
Calcium oxide	3	0.03
Chromium and Chromium compounds	1	0.001
Copper and Copper compounds	2	0.01
Corn or flour dust	4	0.03
Cyanides (Sodium and Calcium compounds)	1	0.001
DDT and related compounds	1	0.001
Fertiliser (phosphates)	3	0.03
Lead and Lead compounds	1	0.001
Magnesium compounds	3	0.03
Nickel compounds	1	0.001
Soot	2	0.01
Tar	2	0.01
Tobacco	3	0.03
Wood dust	2	0.01
Zinc and Zinc compounds	2	0.01

**Table 2 - Gas, vapour or haze substances**

Substance	Category	MAC-value mg/m <sup>3</sup>	Scent limit mg/m <sup>3</sup>	Air quality guideline mg/m <sup>3</sup>
Acetic acid	2	25	0.25	0.25

Acetic anhydride	2	20	-	0.2
Acetone	4	2400	1	70
Acetylene	4	-	-	-
Acrolein	2	0.25	0.05	0.003
Acrylonitrile	1	9	-	0.001
Ammonia	2	18	0.1	0.18
Benzene	1	30	3	0.005
Butane	4	1430	-	40
normal-Butanol	2	150	0.2	1.5
normal-Butyl acetate	2	710	0.03	0.2
Carbon monoxide	4	29	-	1
Carbon disulphide	2	60	0.05	0.05
Chlorine	2	3	0.06	0.03
Chloroform	1	120	30	0.12
Cyclohexane	2	1050	2	10
Cyclohexanone	2	200	0.02	0.03
1,2 Dichloroethane	1	200	17	0.2
Dichloromethane	1	350	4	0.35
Diethyl ether	2	1200	-	0.3
Epichlorohydrin	1	4	-	0.004
Ethane	4	-	-	-



Ethanol	4	1900	7	30
Ethyl acetate	2	1400	0.6	3
Ethylene oxide	2	90	-	0.9
Formaldehyde	2	1.5	0.07	0.015
Furfuryl alcohol	2	20	-	0.02
normal-Heptane	2	1600	-	16
normal-Hexane	2	360	-	3.6
Hydrazine	1	0.13	1	0.01
Hydrochloric acid	2	7	0.2	0.07
Hydrogen	4	-	-	-
Hydrogen fluoride	1	2	-	0.006
Hydrogen phosphide	2	0.4	0.1	0.004
Hydrogen sulphide	2	15	0.0001	0.001
Isobutyl acetate	2	700	0.6	0.3
Isopropyl alcohol	2	980	2	210
Methyl bromide	1	20	-	0.02
Methylene bis phenyl isocyanate (MDI)	2	0.02	-	0.002
Methyl ethyl ketone	2	590	0.7	5

Methyl formate	2	250	-	2.5
Methyl isobutyl ketone	2	410	0.4	0.5
Methyl methacrylate	2	410	0.2	0.1
alpha-Methylstyrene	2	480	0.04	0.03
Monochlorobenzene	1	350	-	0.35
Naphthalene	2	50	0.004	0.1
Nitric oxide (NO)	2	30	-	0.05
nitrous oxide (N2O)	2	4	0.1	
Ozone	2	0.2	0.015	0.002
normal-Pentane	2	360	-	3.6
Perchloroethylene	2	240	12	2.4
Phenol	2	19	0.02	0.1
Phosgene	2	0.4	0.5	0.004
normal-Propyl acetate	2	840	-	8.4
Propylene oxide	2	240	-	2.4
Prussic acid	2	11	-	0.11
Pyridine	2	15	0.04	0.05
Styrene monomer	2	420	0.02	0.03
Sulphur dioxide	2	5	0.9	0.08

Sulphuric acid	2	1	-	0.01
Toluene	2	375	0.08	1
Toluene diisocyanate (TDI)	2	0.14	-	0.001
1,1,1-Trichloroethane	1	1080	-	1
1,1,2-Trichloroethane	2	45	1	0.045
Trichloroethylene	2	190	-	1.9
Vinyl chloride	1	8	-	0.08
Xylene	2	435	0.6	1

**SCHEDULE VI****FORMS****FORM 1****APPLICATION FOR A PERMIT TO SELL, HARVEST OR KEEP A PROTECTED  
BIOLOGICAL RESOURCE OR GENETIC MATERIAL**

1. Name of Applicant

---

2. Address (or address of principal or registered office if a company)

---

---

3. Telephone number(s): \_\_\_\_\_

4. Species of biological resource

\_\_\_\_\_

5. This application is for a

Sale[  ] Harvesting [  ] Keeping [  ] of the protected biological resource or genetic material

6. Purpose for which the protected biological resource or genetic material is required

Traditional purpose [  ] Scientific purpose [  ] Biodiversity protection [  ]

Please explain

\_\_\_\_\_

\_\_\_\_\_

7. Describe the ecological impacts and human health impacts that are likely to result from the granting of the permit

\_\_\_\_\_

\_\_\_\_\_

8. Describe the proposed methods for minimising the impacts described in item 7

\_\_\_\_\_

\_\_\_\_\_

\*\*\*\*\*

I hereby request a permit for the

[  ] sale            [  ] harvesting            [  ] keeping

of the protected biological resource or genetic material referred to above and hereby declare that the information contained in the above form is true and correct to the best of my knowledge, information and belief. I undertake to inform the Ministry responsible for the environment immediately of any change to the information contained in the above form

---

Applicant

---

Date

**FORM 2**

**PERMIT TO SELL, HARVEST OR KEEP A PROTECTED BIOLOGICAL RESOURCE OR GENETIC MATERIAL**

1. Name of permit holder

\_\_\_\_\_

2. Address (or address of principal or registered office if a company)

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Telephone number(s) \_\_\_\_\_

4. Species of biological resource \_\_\_\_\_

5. Date and place of proposed importation \_\_\_\_\_

6. Ecological impacts and human health impacts that are likely to result from the granting of the permit \_\_\_\_\_

\_\_\_\_\_

7. Proposed methods for minimising the impacts described in item 6

\_\_\_\_\_

\_\_\_\_\_

\*\*\*\*\*

I hereby certify that the

[ ] sale            [ ] harvesting            [ ] keeping

of the protected biological resource or genetic material referred to above is permitted to be undertaken in accordance with the conditions of this permit set out above, between the \_\_\_\_ day of \_\_\_\_\_, 20\_\_ and that the \_\_\_\_\_ day of \_\_\_\_\_, 20 .

\_\_\_\_\_  
Minister of Agriculture, Lands, Marine  
Resources and Agro Industries

\_\_\_\_\_  
Date

**FORM 3**

**APPLICATION FOR A PERMIT TO IMPORT, TRANSPORT, STORE OR SELL A FOREIGN ORGANISM**

1. Name of permit holder

\_\_\_\_\_

2. Address (or address of principal or registered office if a company) \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

3. Telephone number(s) \_\_\_\_\_

4. Species of foreign organism to be imported, transported, stored or sold

\_\_\_\_\_

5. Date and place of proposed importation

\_\_\_\_\_

6. Reasons why importation of the foreign organism is required

\_\_\_\_\_

\_\_\_\_\_

7. Describe any impact on agricultural or forestry resources, or on any ecosystem in Antigua and Barbuda, that are likely to result from the importation of the foreign organism

\_\_\_\_\_

\_\_\_\_\_

8. List all diseases, viruses, biological strains and secondary organisms that are likely to be directly or indirectly introduced as a result of the importation the foreign organism

\_\_\_\_\_

\_\_\_\_\_

9. Describe the ecological impacts and human health impacts that are likely to result from the importation of the foreign organism



10. Describe the proposed storage and transportation methods that would ensure that the impacts described in item 7, the effects of the diseases, viruses and biological strains on the ecosystems of Antigua and Barbuda listed in item 8 and the impacts on human health described in item 9 are minimised \_\_\_\_\_

11. Describe the methods to be used for any scientific evaluation, sampling or harvesting \_\_\_\_\_

12. Describe the environment monitoring or management plans that to be established \_\_\_\_\_

13. Describe the nature, duration and extent of any expected commercial research and development plans relating to the foreign organism \_\_\_\_\_

\*\*\*\*\*

I hereby request a permit for the

importation             transportation             storage             sale

of the foreign organism referred to above and hereby declare that the information contained in the above form is true and correct to the best of my knowledge, information and belief. I undertake to inform the Ministry responsible for the environment immediately of any change to the information contained in the above form

\_\_\_\_\_  
Applicant

\_\_\_\_\_  
Date

**FORM 4**

**PERMIT TO IMPORT, TRANSPORT, STORE OR SELL A FOREIGN ORGANISM**

1. Name of permit holder

---

2. Address (or address of principal or registered office if a company)

---

3. Telephone number \_\_\_\_\_

4. Species of foreign organism to be imported, transported, stored or sold

---

5. Date and place of proposed importation

---

6. Storage and transportation methods, and controlled use and release conditions required to be used

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---

7. Methods to be used for any scientific evaluation, sampling or harvesting

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---

8. Environment monitoring or management plans to be established and implemented

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9. Contingency plans to be implemented in the event of any unintended release or use of the foreign organism or as a consequence of any unintended or unplanned impact upon the environment, human health, an ecosystem or any living organism

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\*\*\*\*\*

I hereby certify that the

importation       transportation       storage       sale

of the foreign organism referred to above is permitted to be undertaken in accordance with the conditions of this permit set out above, between the \_\_\_\_ day of \_\_\_\_\_, 20\_\_ and that the \_\_\_\_\_ day of \_\_\_\_\_, 20 .

\_\_\_\_\_  
Minister of Agriculture, Lands, Marine  
Resources and Agro Industries

\_\_\_\_\_  
Date

**FORM 5**

**APPLICATION FOR A PERMIT TO TRADE IN ENDANGERED SPECIES**

1. Name of applicant

---

2. Address (or address of principal or registered office if a company)

---

3. Telephone number \_\_\_\_\_

4. Endangered species for which a trade permit is requested

---

5. Nature of trade proposed

---

---

6. Date and place of proposed importation/exportation

---

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7. State from which/to which the endangered species is to be conveyed

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---

8. Any other State through which the endangered species is to be conveyed

---

---

9. Describe any restrictions imposed by a State referred to in items 7 and 8 on the trade in the endangered species

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I hereby request a permit for the trade in the endangered species referred to above and hereby declare that the information contained in the above form is true and correct to the best of my knowledge, information and belief. I undertake to inform the Ministry responsible for the Environment immediately of any change to the information contained in the above form

---

Applicant

---

Date

**Form 6**

**PERMIT TO TRADE IN AN ENDANGERED SPECIES**

1. Name of permit holder

\_\_\_\_\_

2. Address (or address of principal or registered office if a company)

\_\_\_\_\_

3. Telephone number \_\_\_\_\_

4. Endangered species

\_\_\_\_\_

\_\_\_\_\_

5. Date and place of proposed importation or exportation

\_\_\_\_\_

\_\_\_\_\_

6. Condition on Trade

\_\_\_\_\_

\_\_\_\_\_

I hereby certify that the trade in the endangered species referred to above is permitted to be undertaken in accordance with the conditions of this permit set out above, between the \_\_\_\_ day of \_\_\_\_\_, 20\_\_ and that the \_\_\_\_\_ day of \_\_\_\_\_, 20 .

\_\_\_\_\_  
Minister Responsible for the Environment

\_\_\_\_\_  
Date

**FORM 7**

**ACTIVITY STOP NOTICE**

1. Name of Accused

---

2. Address (or address of principal or registered office if a company)

---

3. Telephone number

---

4. Nature of the Office for which stop notice is being issued

---

---

5. Date the offence occurred

---

6. Provisions of the Act or Regulations that have been contravened by the activity

---

---

7. Date the activity must cease

---

8. Comments

---

---

I hereby issue a stop notice for the activity referred to above and hereby declare that the information contained in the above form is true and correct to the best of my knowledge, information and belief.

\_\_\_\_\_  
Director of Environment

\_\_\_\_\_  
Date

**FORM 8**

**PROHIBITION NOTICE**

1. Name of Accused

---

2. Address (or address of principal or registered office if a company)

---

---

3. Telephone number

---

4. Nature of the Office for which the Prohibition notice is being issued

---

---

5. Date the offence occurred

---

6. Provisions of the Act or Regulations that have been contravened by the activity

---

8. Date the activity must cease

---

9. Comments

---

---

I hereby issue a Prohibition notice for the activity referred to above and hereby declare that the information contained in the above form is true and correct to the best of my knowledge, information and belief.

\_\_\_\_\_  
Director of Environment

\_\_\_\_\_  
Date



**FORM 9**

**CONFISCATION NOTICE**

1. Name of Accused

---

2. Address (or address of principal or registered office if a company)

---

---

3. Telephone number

---

4. Nature of the Office for which confiscation notice is being issued

---

---

5. Item(s) being confiscated

---

6. Date the offence occurred

---

7. Provisions of the Act or Regulations that have been contravened by the activity

---

---

8. Date the activity must cease

---

9. Comments

---

---

I hereby issue a confiscation notice for the item referred to above and hereby declare that the information contained in the above form is true and correct to the best of my knowledge, information and belief.

---

Environmental Officer

---

Date

**FORM 10**  
**WASTE DUMPING PERMIT APPLICATION**

1. Name of Applicant

---

2. Address (or address of principal or registered office if a company)

---

---

3. Telephone number \_\_\_\_\_

4. Type of waste or matter for which a trade permit is requested

---

---

5. Nature of waste or matter to be disposed

---

---

6. Date and place of proposed disposal

---

---

7. Manufacturer of and country in which the product generating the waste or matter was made

---

8. Any other comment or information on the matter or waste

---

---

9. Describe any known restrictions imposed by any State on the waste or matter being dumped

---

---

I hereby request a permit for the dumping of the waste/matter referred to above and hereby declare that the information contained in the above form is true and correct to the best of my knowledge, information and belief. I undertake to inform the Ministry responsible for the Environment immediately of any change to the information contained in the above form

---

Applicant

---

Date

**FORM 11**

**PERMIT TO DUMP WASTE OR RESTRICTED MATERIAL**

1. Name of Permit Holder

---

---

2. Address (or address of principal or registered office if a company)

---

---

3. Telephone number \_\_\_\_\_

4. Waste or Restricted Material

---

5. Date and place of proposed dumping

---

6. Conditions of dumping

---

---

I hereby certify that the dumping of waste/material referred to above is permitted to be undertaken in accordance with the conditions of this permit set out above, between the \_\_\_\_ day of \_\_\_\_\_, 20\_\_ and the \_\_\_\_\_ day of \_\_\_\_\_, 20 .

\_\_\_\_\_  
Minister

\_\_\_\_\_  
Date

**SCHEDULE VII****CATEGORIES OF HAZARDOUS SUBSTANCES****ANNEX 1****WASTE STREAMS**

Y1 Clinical wastes from medical care in hospitals, medical centres and clinics

Y2 Wastes from the production and preparation of pharmaceutical products

Y3 Waste pharmaceuticals, drugs and medicines

Y4 Wastes from the production, formulation and use of biocides and phyto-pharmaceuticals

Y5 Wastes from the manufacture, formulation and use of wood preserving chemicals

Y6 Wastes from the production, formulation and use of organic solvents

Y7 Wastes from heat treatment and tempering operations containing cyanides

Y8 Waste mineral oils unfit for their originally intended use

Y9 Waste oils/water, hydrocarbons/water mixtures, emulsions

Y10 Waste substances and articles containing or contaminated with polychlorinated biphenyls (PCBs) and/or polychlorinated terphenyls (PCTs) and/or polybrominated biphenyls (PBBs)

Y11 Waste tarry residues arising from refining, distillation and any pyrolytic treatment

Y12 Wastes from production, formulation and use of inks, dyes, pigments, paints, lacquers, varnish

Y13 Wastes from production, formulation and use of resins, latex, plasticizers, glues/adhesives

Y14 Waste chemical substances arising from research and development or teaching activities which are not identified and/or are new and whose effects on man and/or the environment are not known

Y15 Wastes of an explosive nature not subject to other legislation

Y16 Wastes from production, formulation and use of photographic chemicals and processing materials

Y17 Wastes resulting from surface treatment of metals and plastics

Y18 Residues arising from industrial waste disposal operations

*Wastes Having as Constituents:*

Y19 Metal carbonyls

Y20 Beryllium; beryllium compounds

Y21 Hexavalent chromium compounds

Y22 Copper compounds

Y23 Zinc compounds

Y24 Arsenic; arsenic compounds

Y25 Selenium; selenium compounds

Y26 Cadmium; cadmium compounds

Y27 Antimony; antimony compounds

Y28 Tellurium; tellurium compounds

Y29 Mercury; mercury compounds

Y30 Thallium; thallium compounds

Y31 Lead; lead compounds

Y32 Inorganic fluorine compounds excluding calcium fluoride

Y33 Inorganic cyanides

Y34 Acidic solutions or acids in solid form

Y35 Basic solutions or bases in solid form

- Y36 Asbestos (dust and fibres)
- Y37 Organic phosphorous compounds
- Y38 Organic cyanides
- Y39 Phenols; phenol compounds including chlorophenols
- Y40 Ethers
- Y41 Halogenated organic solvents
- Y42 Organic solvents excluding halogenated solvents
- Y43 Any congener of polychlorinated dibenzo-furan
- Y44 Any congener of polychlorinated dibenzo-p-dioxin
- Y45 Organohalogen compounds other than substances referred to in this Annex (e.g. Y39, Y41, Y42, Y43, Y44).
- Y46 Wastes collected from households
- Y47 Residues arising from the incineration of household wastes
- Other  
Radioactive Wastes

## ANNEX II

### LIST OF HAZARDOUS CHARACTERISTICS

#### UN CLASS CODE CHARACTERISTICS

##### **1 H1 Explosive**

An explosive substance or waste is a solid or liquid substance or waste (or mixture of substances or wastes) which is in itself capable by chemical reaction of producing gas at such a temperature and pressure and at such speed as to cause damage to the surroundings.

### **3 H3 Flammable liquids**

The word "flammable" has the same meaning as "inflammable". Flammable liquids are liquids, or mixtures of liquids, or liquids containing solids in solution or suspension (for example, paints, varnishes, lacquers, etc., but not including substances or wastes otherwise classified on account of their dangerous characteristics) which give off a flammable vapour at temperatures of not more than 60.5 degrees C. closed cup test, or not more than 65.6 degree C. open-cup test. (Since the results of open-cut tests and of closed-cup tests are not strictly comparable and even individual results by the same test are often variable, regulations varying from the above figures to make allowance for such differences would be within the spirit of this definition).

#### **4.1 H4.1 Flammable solids**

Solids, or waste solids, other than those classed as explosives, which under conditions encountered in transport are readily combustible, or may cause or contribute to fire through friction.

#### **4.2 H4.2 Substances or wastes liable to spontaneous combustion**

Substances or wastes which are liable to spontaneous heating under normal conditions encountered in transport, or to heating up on contact with air, and being then liable to catch fire.

#### **4.3 H4.3 Substances or wastes which, in contact with water, emit flammable gases**

Substances or wastes which by interaction with water, are liable to become spontaneously flammable or to give off flammable gases in dangerous quantities.

#### **5.1 H5.1 Oxidising**

Substances or wastes which, while in themselves not necessarily combustible, may, generally by yielding oxygen cause, or contribute to, the combustion of other materials.

#### **5.2 H5.2 Organic peroxides**

Organic substances or wastes which contain the bivalent-O-O-structure are thermally unstable substances which may undergo exothermic self-accelerating decomposition.

#### **6.1 H6.1 Poisonous (Acute)**

Substances or wastes liable either to cause death or serious injury or to harm human health if swallowed or inhaled or by skin contact.

#### **6.2 H6.2 Infectious substances**

Substances or wastes containing viable micro organisms or their toxins which are known or suspected to cause disease in animals or humans.

### **7 H7 Radioactive Materials**

Substances or material which spontaneously emit a significant radiation and of which the specific activity is greater than 70kBq/kg (2nCi/g).



**8 H8 Corrosives**

Substances or wastes which, by chemical action, will cause severe damage when in contact with living tissue, or in the case of leakage, will materially damage, or even destroy, other goods or the means of transport; they may also cause other hazards.

**9 H10 Liberation of toxic gases in contact with air or water**

Substances or wastes which, by interaction with air or water, are liable to give off toxic gases in dangerous quantities.

**9 H11 Toxic (Delayed or chronic)**

Substances or wastes which, if they are inhaled or ingested or if they penetrate the skin, may involve delayed or chronic effects, including carcinogenicity.

**9 H12 Ecotoxic**

Substances or wastes which, if released, present or may present immediate or delayed adverse impacts to the environment by means of bio-accumulation and/or toxic effects upon biotic systems.

**9 H13** Capable, by any means, after disposal, of yielding another material e.g. leachate, which possesses any of the characteristics listed above.

**SCHEDULE VIII**  
**LIST OF PROTECTED WILDLIFE**  
**PART 1 - ANIMALS**

<b>Common Name</b>	<b>Species</b>	<b>Notes</b>
<b>Mammals</b>		
<b>All Marine Mammals</b> found in Antigua and Barbuda waters including all cetaceans (whale, dolphin, and porpoise species), including:		
Humpback Whale	<i>Megaptera novaeangliae</i>	
<b>Bats</b>		
Funnel Eared Bat	<i>Natalus stramineus stramineus</i> Gray 1834	
Long Tongued Bat	<i>Monophyllus plethodon luciae</i> Miller 1902	
Lesser Antillean Fruit Bat	<i>Brachyphylla cavernarum cavernarum</i> Gray 1834	
Fisherman Bat	<i>Noctilio leporinus mastivus</i> Vahl 1797	
Brazilian Free Tailed bat	<i>Tadarida brasiliensis antillarum</i> Miller 1902	
Fruit Bat	<i>Artibeus jamaicensis jamaicensis</i> Leach 1821	
<b>Birds</b>		
All Native Bird Species Including the following		
Barbuda Warbler	<i>Dendroica subita</i>	National endemic
Antigua Broad-winged Hawk	<i>Buteo platypterus insulicola</i>	National endemic
West Indian Whistling Duck	<i>Dendrocygna arborea</i>	
Piping Plover	<i>Charadrius melodius</i>	
Roseate Tern	<i>Sterna dougalli</i>	
Least Tern	<i>Sternata antillarum</i>	
White-crowned Pigeon	<i>Columba leucocephala</i> ( <i>Patagioenas leucocephala</i> )	
Ruddy Quail-Dove	<i>Geotrygon montana</i>	
Bridled Quail-Dove	<i>Geotrygon mystacea</i>	
Red-necked Pigeon	<i>Columba squamosa Patagioenas squamosa</i>	
Blue-hooded Euphonia	<i>Tanagra musica Euphonia musica</i>	
Lesser Antillean Flycatcher	<i>Myiarchus oberi</i>	

Frigatebird	<i>Fregata magnificens</i>	
Brown Pelican	<i>Pelecanus occidentalis occidentalis</i>	
Brown Trawler	<i>Cinlocerthia ruficauda</i>	
White Cheek Pintail	<i>Anas bahamensis</i>	
Little Egret	<i>Egretta garzetta</i>	
Antillean Crested Hummingbird	<i>Orthorhyncus cristatus</i>	
. Mangrove Cuckoo	<i>Coccyzus minor</i>	
Red Billed Tropic Bird	<i>Phaethon aethereus</i>	
Little Blue Heron	<i>Egretta caerulea</i>	
Green-throated Carib	<i>Eulampis holosericeus</i>	
. Purple-throated Carib	*, <i>Eulampis jugularis</i>	
Tropical mockingbird	<i>Mimus gilvus</i>	
ALL nesting terns and seabirds, excluding the Laughing Gull ( <i>Larus atricilla</i> )		
<b>Reptiles</b>		
Antigua Racer Snake	<i>Alsophis antiguae</i>	National Endemic
Green Turtle	<i>Chelonia mydas</i>	
Hawksbill Turtle	<i>Eretmochelys imbricata</i>	
Loggerhead Turtle	<i>Caretta</i>	
Leatherback Turtle	<i>Dermochelys coriacea</i>	
Lesser Antillean Iguana	<i>Iguana delicatissima</i>	
Antigua Least Gecko	<i>Sphaerodactylus elegantulus</i>	National Endemic
Redonda Dwarf Gecko	<i>Sphaerodactylus sp.</i>	Endemic to Redonda
Antiguan Ground Lizard	<i>Ameiva griswoldi</i>	National Endemic
Redonda Ground Lizard	<i>Ameiva atrata</i>	Endemic to Redonda
Redonda Tree Lizard	<i>Anolis nubilis</i>	Endemic to Redonda
Antiguan spotted anole	<i>Anolis leachi</i>	National Endemic
Watts' Tree Lizard	<i>Anolis watti</i>	National Endemic
Barbuda Tree Lizard	<i>Anolis forresti</i>	Barbuda endemic
<b>Fish (sea and fresh water)</b>		
TBD		
<b>Shellfish (Moluscs, Crustaceans, Echinoderms)</b>		
TBD		
<b>Arthropods (Insects, Spiders, Crabs)</b>		
TBD		
<b>Corals, sea anenomes, sponges</b>		
TBD		
<b>Starfish, sea urchins, sea cucumbers</b>		
TBD		

**PART 2 – PLANTS**

<b>Species</b>	<b>Family</b>	<b>Common Name</b>	<b>Notes</b>
<b>Ferns</b>			
All native fern species	Pteridophyta	Ferns	This covers all ferns in the wild.
<b>Orchids</b>			
All native orchid species	Orchidaceae	Orchids	This covers all orchids in the wild.
<b>Palm Trees</b>			
All native palm species.			This covers most palms in the wild but excludes <i>Cocos nucifera</i> (coconut) and <i>Phoenix dactylifera</i> (date palm)
<i>Acrocomia aculeata</i> (Jacq.) Lodd	Arecaceae	Macaw Palm	
<i>Coccothrinax barbadensis</i> Becc.	Arecaceae	Palmetto	
<i>Roystonea oleracea</i> O.F. Cook	Arecaceae	Cabbage Palm	
<i>Thrinax morrisii</i> H. Wendl.	Arecaceae	Pimetta	
<b>Bromeliads</b>			
All native Bromeliads	Bromeliaceae	Bromeliad, man-pon-tree	This covers all Bromeliads in the wild.
<b>Agaves</b>			
All native Agaves			This covers all Agaves in the wild.
<i>Agave karatto</i> Miller	Agavaceae	Dagger	
<i>Agave dussiana</i> Trel.	Agavaceae	Dagger	
<i>Furcraea tuberosa</i> (P. Mill.) Ait. F.	Agavaceae	Dagger	
<b>Mangroves</b>			
All mangrove species including:			
<i>Avicennia germinans</i> (L.) L.	Acanthaceae	Black Mangrove	
<i>Avicennia schaueriana</i>	Acanthaceae	Black Mangrove	

<i>Conocarpus erectus</i> L.	Combretaceae	Button Mangrove
<i>Laguncularia racemosa</i> (L.) Gaertn. f.	Combretaceae	White Mangrove
<i>Rhizophora mangle</i> L.	Rhizophoraceae	Red Mangrove
<b>Cacti</b>		
All native cacti species including:		This covers all cacti in the wild except for the edible prickly pear, <i>Opuntia cochenilifera</i>
<i>Acanthocereus tetragonus</i> (L.) Humm	Cactaceae	
<i>Hylocereus Trigonus</i> (Haw) Saff	Cactaceae	Creeping cactus
<i>Mammillaria nivosa</i> Link ex Pfeiff.	Cactaceae	
<i>Melocactus intortus</i> (Mill.) Urb.	Cactaceae	Turk's cap cactus
<i>Opuntia currassavica</i> (L.) Miller	Cactaceae	
<i>Opuntia dillenii</i> (Ker Gawl.) Haw.	Cactaceae	
<i>Opuntia rubescens</i> Salm-Dyck Ex DC	Cactaceae	Tree cactus
<i>Opuntia triacantha</i> (Willd.) Sweet	Cactaceae	
<i>Pilosocereus royenii</i> (L.) By.& Row.	Cactaceae	Dul dul
<i>Rhipsalis baccifera</i> (J. S. Miller) Stearn	Cactaceae	
<b>Mistletoes</b>		
Hemi-parasitic mistletoes including:		
<i>Dendropemon caribaeus</i> Krug & Urb.	Loranthaceae	Caribbean mistletoe
<i>Psittacanthus martinicensis</i> (Presl) Eichler	Loranthaceae	Man 'pon tree
<i>Phoradendron trinervium</i> (Lam) Griseb.	Santalaceae	Angled mistletoe
<b>All very large trees</b>		
All trees with a girth in excess of 180 cm		
<b>All IUCN Red Listed Species inc:</b>		
<i>Guaiacum officinale</i> L.	Zygophyllaceae	Lignum Vitae
<i>Cedrela odorata</i> L.	Meliaceae	Red cedar

<i>Schoepfia arenaria</i> Britt.	Olacaceae	
<i>Tabernaemontana citrifolia</i> L.	Apocynaceae	Milky Bush
<i>Swietenia mahagoni</i> (L.) Jacq.	Meliaceae	W.I. mahogany
<b>National Endemics/near-Endemics</b>		
<i>Pectis ericifolia</i> Keil	Asteraceae	
<i>Jacquemontia ovalifolia</i>	Convolvulaceae	
<b>Regional Endemic Monocots</b>		
<i>Anthurium grandifolium</i> (Jacq.) Kunth	Araceae	
<i>Smilax coriacea</i> Spreng.	Smilacaceae	Greenbriar
<i>Smilax guianensis</i> Vitman	Smilacaceae	
<i>Heliconia bihai</i> (L.) L.	Heliconiaceae	Wild plantain
<i>Heliconia caribaea</i> Lam.	Heliconiaceae	Lobsterclaw
<b>Regional Endemic Dicots</b>		
<i>Hedyosmum arborescens</i> Sw.	Chloranthaceae	Cigarbush
<i>Peperomia myrtifolia</i> (Vahl) A. Dietr.	Piperaceae	Myrtle-leaf peperomia
<i>Piper dussii</i> C. DC.	Piperaceae	
<i>Aristolochia rugosa</i> Lam.	Aristolochiaceae	
<i>Hernandia sonora</i> L.	Hernandiaceae	Mago, Jack-in-the-box
<i>Cinnamomum elongatum</i> (Vahl ex Nees) Kosterm.	Lauraceae	Pitch-pine sweetwood
<i>Ocotea leucoxydon</i> (Sw.) de Laness	Lauraceae	Loblolly sweetwood
<i>Ocotea patens</i> (Sw.) Nees	Lauraceae	Capberry
<i>Myrcia citrifolia</i> (Aublet) Urban var. <i>imrayana</i>	Myrtaceae	Red birch, guava berry
<i>Psidium longipes</i> (O. Berg) McVaugh var. <i>orbiculare</i>	Myrtaceae	Mangrove berry
<i>Henriettea triflora</i> (Vahl) Alain	Melastomataceae	
<i>Acacia muricata</i> (L.) Willd.	Leguminosae	Spineless wattle
<i>Albizia berteriana</i> (DC.) M. Gomez	Leguminosae	
<i>Ziziphus reticulata</i> (Vahl) DC.	Rhamnaceae	Ironwood
<i>Cecropia schreberiana</i> Miq.	Moraceae	Trumpet tree
<i>Croton betulinus</i> M. Vahl	Euphorbiaceae	Nanny bush
<i>Sapium caribaeum</i> Urban	Euphorbiaceae	Milk tree
<i>Ouratea guildingii</i> (Planchon) Urban	Ochnaceae	
<i>Byrsonima trinitensis</i> Adr. Juss.	Malpighiaceae	Tanning tree

<i>Malpighia martinicensis</i> Jacq.	Malpighiaceae	Wild cherry
<i>Clusia rosea</i> Jacq.	Clusiaceae	Pitch apple, autograph tree
<i>Dacryodes excelsa</i> Vahl	Burseraceae	Gommier
<i>Zanthoxylum punctatum</i> Vahl	Rutaceae	Ramgoat
<i>Sterculia caribaea</i> R. Br.	Sterculiaceae	Wild Mahot
<i>Coccoloba x boxii</i> Sandw.	Polygonaceae	
<i>Marcgravia umbellata</i> L.	Marcgraviaceae	
<i>Jacquinia berterii</i> Sprengel	Theophrastaceae	
<i>Ardisia obovata</i> Ham.	Myrsinaceae	
<i>Antirhea acutata</i> (DC.) Urban	Rubiaceae	Mutton polly
<i>Antirhea coriacea</i> (Vahl) Urban	Rubiaceae	
<i>Catesbaea melanocarpa</i> Urban	Rubiaceae	Black Berry
<i>Genipa americana</i> L.	Rubiaceae	
<i>Tabernaemontana citrifolia</i> L.	Apocynaceae	Milky Bush
<i>Brunfelsia americana</i> L.	Solanaceae	Lady of the night
<i>Catalpa longissima</i> (Jacq.) Dum. Cours.	Bignoniaceae	
<i>Ambrosia hispida</i> Pursh	Asteraceae	
<i>Baccharis dioica</i> Vahl	Asteraceae	

**PART 3**

**FOREST RESERVES IN ANTIGUA AND BARBUDA**

<b>FOREST RESERVE</b>	<b>AREA</b>	<b>REASON FOR PROTECTION</b>
<b>CHRISTIAN VALLEY</b>		<b>BIODIVERSITY</b>
<b>BODY PONDS</b>		<b>BIODIVERSITY AND WATER RESOURCES</b>
<b>REDONDA</b>		<b>WILD LIFE</b>
<b>SUGAR LOAF</b>		<b>BIODIVERSITY</b>
<b>BLACK GHAUT GAYNORS</b>		<b>WETLAND BIODIVERSITY</b>
<b>WALLINGS</b>		<b>BIODIVERSITY</b>



**SCHEDULE IX****LIST OF MULTILATERAL ENVIRONMENT INSTRUMENTS AND ENVIRONMENT  
CONVENTIONS****Table A**

<b>No.</b>	<b>Instrument &amp; Title</b>	<b>Place &amp; Date of Signature</b>	<b>Ratification</b>
1	Basel Convention on the Transboundary Movement of Hazardous Wastes and its Disposal and its protocols.	March 22 <sup>nd</sup> 1989 Basel	April 5 <sup>th</sup> 1993 Accession
2	United Nations Framework Convention on Climate Change and its protocols.	March 21 <sup>st</sup> 1994 (entry into force)	February 2 <sup>nd</sup> 1993 Ratification
3	Kyoto Protocol to the UN Framework Convention on Climate Change	December 11 <sup>th</sup> 1997 Kyoto	October 28 <sup>th</sup> 1998 Ratification
4	UN Convention to Combat Desertification In Those Countries Experiencing Serious Droughts and/or Desertification Particularly Africa and its protocols.	October 14 <sup>th</sup> 1994 Paris	June 6 <sup>th</sup> 1997 Ratification
5	UN Convention on Biological Diversity and its protocols.	June 5 <sup>th</sup> 1992 Rio de Janeiro	March 9 <sup>th</sup> 1993 Ratification
6	Cartagena Protocol on Biosafety to the Convention on Biological Diversity	January 29 <sup>th</sup> 2000 Montreal	May 24 <sup>th</sup> 2000 (signature)
7	Protocol Concerning Pollution From Land Based Sources And Activities in the Wider Caribbean Region (Protocol to the Cartagena Convention)	October 6 <sup>th</sup> 1999 Aruba	
8	Protocol Concerning Specially Protected Areas and Wildlife (SPAW Protocol to the Cartagena Convention)	January 18 <sup>th</sup> 1990 Jamaica	January 18 <sup>th</sup> 1990 Signature
9	Convention on International Trade in Endangered Species (CITES) and its protocols.		October 6 <sup>th</sup> 1997
10	Vienna Convention for Protection of the Ozone Layer and its protocols.	December 3 <sup>rd</sup> 1992	December 3 <sup>rd</sup> 1992

			(accession)
11	Montreal Protocol on Substances that Deplete the Ozone Layer and its protocols.	September 16 <sup>th</sup> 1987 Montreal	March 12 <sup>th</sup> 1992 (accession)
12	Amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer	29 <sup>th</sup> June 1990 London	February 23 <sup>rd</sup> 1993 (accession)
14	Amendment to the Montreal Protocol On Substances That Deplete the Ozone Layer	December 25 <sup>th</sup> 1992 Copenhagen	July 19 <sup>th</sup> 1993 (accession)
15	Amendment to the Montreal Protocol on Substances That Deplete the Ozone Layer adopted by the 9 <sup>th</sup> meeting of the Parties	September 17 <sup>th</sup> 1997 Montreal	February 10 <sup>th</sup> 2000 ratification
16	The Stockholm Convention on Persistent Organic Pollutants		February 2004

**Table B**

<i><b>Instrument &amp; Title</b></i>	<i><b>Place &amp; Date of Signature</b></i>	<i><b>Ratification</b></i>
Basel Convention on the Transboundary Movement of Hazardous Wastes and its Disposal and its protocols.	March 22 <sup>nd</sup> 1989 Basel	April 5 <sup>th</sup> 1993 Accession
The Stockholm Convention on Persistent Organic Pollutants and its protocols.		February 2004
The Rotterdam Convention on the trade of hazardous substances and its protocols.		

**SCHEDULE X****LIST OF PROTECTED AREAS CATEGORY**

**CATEGORY Ia:** Strict Nature Reserve: protected area managed mainly for science **Definition:** Area of land and/or sea possessing some outstanding or representative ecosystems, geological or physiological features and/or species, available primarily for scientific research and/or environmental monitoring.

**CATEGORY Ib** Wilderness Area: protected area managed mainly for wilderness protection **Definition:** Large area of unmodified or slightly modified land, and/or sea, retaining its natural character and influence, without permanent or significant habitation, which is protected and managed so as to preserve its natural condition.

**CATEGORY II** National Park: protected area managed mainly for ecosystem protection and recreation.

**Definition:** Natural area of land and/or sea, designated to (a) protect the ecological integrity of one or more ecosystems for present and future generations, (b) exclude exploitation or occupation inimical to the purposes of designation of the area and (c) provide a foundation for spiritual, scientific, educational, recreational and visitor opportunities, all of which must be environmentally and culturally compatible.

**CATEGORY III** Natural Monument: protected area managed mainly for conservation of specific natural features.

**Definition:** Area containing one, or more, specific natural or natural/cultural feature which is of outstanding or unique value because of its inherent rarity, representative or aesthetic qualities or cultural significance.

**CATEGORY IV** Habitat/Species Management Area: protected area managed mainly for conservation through management intervention.

**Definition:** Area of land and/or sea subject to active intervention for management purposes so as to ensure the maintenance of habitats and/or to meet the requirements of specific species.

**CATEGORY V** Protected Landscape/Seascape: protected area managed mainly for landscape/seascape conservation and recreation.

**Definition:** Area of land, with coast and sea as appropriate, where the interaction of people and nature over time has produced an area of distinct character with significant aesthetic, ecological and/or cultural value, and often with high biological diversity. Safeguarding the integrity of this traditional interaction is vital to the protection, maintenance and evolution of such an area.

**CATEGORY VI** Managed Resource Protected Area: protected area managed mainly for the sustainable use of natural ecosystems.

**Definition:** Area containing predominantly unmodified natural systems, managed to ensure long term protection and maintenance of biological diversity, while providing at the same time a sustainable flow of natural products and services to meet community needs.

**SCHEDULE XI** (Section 83)**LIST OF PROTECTED WATERSHEDS**

<b>Number</b>	<b>Watershed</b>	<b>Area (ha)</b>	<b>Existing Storage (AF)</b>	<b>Existing Storage (Municipal) AF</b>	<b>Groundwater Yield (m<sup>3</sup>/yr)</b>
1	Potworks	3,160	30.6	4,010	220,000
2	Body Ponds	4,000	200.4	278	390,000
3	Christian Valley	1,780	9.2	166	610,000
4	Parham	1,472	33.4	-	-
5	Fitches Creek	1,040	334.5	-	-
6	Bethesda	120	540.00	-	-

ha = Hectares; AF = acre-feet; m<sup>3</sup>/yr = cubic meters per year

**SCHEDULE XII** (Section 85)

**List of Important Wetlands**

<b>Wetland</b>	<b>Area (ha)</b>	<b>Coordinates</b>	<b>Function</b>
<b>ANTIGUA</b>			
McKinnons Salt Pond	78	17°09'N 61°51'W	HABITAT: Inland wetland, mangrove, shrubland, Salina. Critical Bird Nesting Ground OTHER: Water catchment, Flood control mechanism.
Hanson's Bay Flashes	185	17°07'N 61°52'W	HABITAT: Inland wetland, mangrove, shrubland
Valley Church	20	17°04'N 61°53'W	Habitat: Coastline, inland wetland, mangrove, salina
Fitches Creek Bay- Parham Harbour	730	17°07'N 61°47'W	HABITAT: Inland wetland, mangrove, salina
Potworks Dam	115	17°04'N 61°46'W	HABITAT: Inland wetland, shrubland, woodland
Christian Cove	95	17°03'N 61°45'W	HABITAT: Coastline, wetland, mangrove
Bethesda	5	17°02'N 61°44'W	HABITAT: Inland wetland, shrubland
Pinching Bay in Five Islands Harbour			Habitat: Coastline, inland wetland, mangrove, salina
Willoughby Bay			HABITAT: Coastline, wetland, mangrove
<b>BARBUDA</b>			
Bull Hole and Fresh Water Pond			HABITAT: Inland wetland, shrubland
Spanish Point Flash			HABITAT: Inland wetland, mangrove, shrubland
Welches' Flashes			HABITAT: Inland wetland, mangrove, shrubland
Castle Hill			HABITAT: Inland wetland, shrubland
Two Foot Bay			HABITAT: Coastline, wetland,

**SCHEDULE XIII****SUSTAINABLE ISLAND RESOURCES FRAMEWORK FUND (SIRFF)****(A) General Board of Directors:**

1. The Sustainable Island Resources Framework Fund (SIRFF) established under section 84 of this Act, shall be governed by a General Board of Directors hereinafter referred to as the “General Board” comprised of the following representatives, the —
  - a. Permanent Secretary for the Ministry responsible for the Environment
  - b. Budget Director
  - c. Representative of the Ministry of Finance
  - d. Director of the Environment
  - e. Environmental NGO Representative
2. Rules of Procedure for the General Board are as follows —
  - a. Rules of procedures for the operation of the General Board established under section 84 shall be established in by-laws which shall be determined at the first meeting of the General Board no more than three months after the Bill comes into effect.
  - b. The General Board shall meet at least two times per calendar year and as necessary to consider matters brought before it by the Boards that govern the thematic Funding windows.
  - c. The General

**(B) Thematic and Hybrid Funding Windows**

1. The General Board shall establish under the SIRFF such thematic or hybrid funding windows as it deems fit to meet the objectives and purposes of this Bill.
2. Each thematic or hybrid funding window established under paragraph 1 shall be governed by an independent Boards of Directors which shall be appointed in consultation with the General Board.

3. Each independent Board established under paragraph (2) shall report to the General Board of Directors established under section 84.
4. Rules of procedure for the operation of each independent Board shall be prescribed by Regulations made under this Act.

## **SCHEDULE XIV**

### **Penalties**

Paragraph	Prescribed Penalties
(a)	A fine of not less than two thousand dollars nor more than five thousand dollars
(b)	A fine of not less than five thousand dollars nor more than seven thousand dollars
(c)	A fine of not less than eight thousand dollars nor more than twelve thousand dollars and imprisonment for six months
(d)	A fine of not less than twelve thousand dollars nor more than twenty thousand and imprisonment for one year
(e)	A fine of not less than fifteen thousand dollars nor more than twenty thousand dollars and imprisonment for five years

Provided that where the offender, liable to a prescribed fine under any of the aforesaid paragraphs is a body corporate, the body corporate shall be liable to a fine not less than twice such prescribed minimum fine nor more than twice such prescribed maximum fine, and where the offender liable to a prescribed term of imprisonment under any other aforesaid paragraphs is a body corporate, the body corporate shall be to twice such imprisonment.



**SCHEDULE XV****Amendments and Repeal****Repeal of Wild Birds Act Cap.**

1. The Wild Birds Act Cap. Xx is hereby repealed.

**Section 23 of Physical Planning Act amended**

1. Section 23 of the Physical Planning Act is amended—

(a) by repealing and replacing sub-section(4) by the following:

“(4) Where the Authority determines that an environmental impact assessment is required, the Authority shall, within 60 days of receipt of an application for a development permit, issue a written notice notifying the applicant of the determination that an environmental impact assessment is required and submitting the plan to the environment department for development of the TORs for the preparation of the EIA for the development and the period within which the EIA is to be submitted to the Department through the DCA.”

(b) by repealing and replacing sub-section(5) by the following:

“(5) Where the Authority issues a notice under subsection (4), the applicant shall submit to the Environment Department an environmental impact assessment on the proposed development in such form and containing such information as may be prescribed in the TORs.

(c) by repealing and replacing section(5) by the following:

“ 56.The Town and Country Planner shall further name the Environment Department as the primary agency responsible for the administration and management of such areas declared under this act with a mandate to develop an environmental management plan for this area.

**Amendment of Forestry Act**

2. The Forestry Act is amended

(a) by deleting the word “Forestry Officer” in section 2;

(b) by deleting the words “Chief Forest Officer” and substituting the words “Director of Environment” wherever it appears in Part II (6), Part II (7). Part III (9) (a). Part III (11) and Part III (12) (1) and (2).

(c) by repealing Part 1 (3) and (4);

(d) by renumbering Part 11 as Part 1, Part 111 as Part 11 and Part IV as Part 111.

Passed the House of Representatives on  
the 23rd day of April, 2015.

Passed the Senate on the 12th day of May,  
2015.

**Gerald Watt, Q.C.,**  
*Speaker.*

**Alicia Williams Grant,**  
*President.*

**Ramona Small,**  
*Clerk to the House of Representatives.*

**Ramona Small,**  
*Clerk to the Senate.*