

**PROTOCOL CONCERNING POLLUTION FROM
LAND-BASED SOURCES AND ACTIVITIES TO THE
CONVENTION FOR THE PROTECTION AND
DEVELOPMENT OF THE MARINE ENVIRONMENT OF THE
WIDER CARIBBEAN REGION**

**UNITED NATIONS
1999**

LIST OF ARTICLES

Article I	Definitions
Article II	General Provisions
Article III	General Obligations
Article IV	Annexes
Article V	Cooperation and Assistance
Article VI	Monitoring and Assessment Programmes
Article VII	Environmental Impact Assessment
Article VIII	Development of Information Systems
Article IX	Transboundary Pollution
Article X	Participation
Article XI	Education and Awareness
Article XII	Reporting
Article XIII	Institutional Mechanisms
Article XIV	Scientific, Technical and Advisory Committee
Article XV	Meetings of the Contracting Parties
Article XVI	Funding
Article XVII	Adoption and Entry into Force of New Annexes and Amendments to Annexes
Article XVIII	Ratification, Acceptance, Approval and Accession
Article XIX	Signature

LIST OF ANNEXES

- Annexes I Sources Categories, Activities and Associated Pollutants of Concern
- Annexes II Factors To Be Used in Determining Effluent and Emission Source Controls and Management Factors
- Annexes III Domestic Wastewater
- Annexes IV Agricultural Non-Point Sources of Pollution

**PROTOCOL CONCERNING POLLUTION FROM LAND-BASED SOURCES AND
ACTIVITIES TO THE CONVENTION FOR THE PROTECTION AND
DEVELOPMENT OF THE MARINE ENVIRONMENT OF
THE WIDER CARIBBEAN REGION**

The Contracting Parties to this Protocol,

Being Parties to the Convention for the Protection and Development of the Marine Environment in the Wider Caribbean Region, done at Cartagena de Indias, Colombia on 24 March 1983,

Resolved, therefore, to implement the Convention and specifically Article 7,

Taking note of Article 4, paragraph 4 of the Convention,

Considering the principles of the Rio Declaration and Chapter 17 of Agenda 21 adopted by the United Nations Conference on the Environment and Development (Rio de Janeiro, 1992), and the Programme of Action for the Small Islands Developing States (Barbados, 1994), as well as the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (Washington, 1995), including the illustrative list of funding sources set forth in its Annex,

Recalling the relevant rules of international law as reflected in the 1982 United Nations Convention on the Law of the Sea and in particular its Part XII,

Conscious of the serious threat to the marine and coastal resources and to human health in the Wider Caribbean Region posed by pollution from land-based sources and activities,

Aware of the ecological, economic, aesthetic, scientific, recreational and cultural value of the marine and coastal ecosystems of the Wider Caribbean Region,

Recognising the inequalities in economic and social development among the countries of the Wider Caribbean Region and their needs for the achievement of sustainable development,

Determined to cooperate closely in taking the appropriate measures to protect the marine environment of the Wider Caribbean Region against pollution from land-based sources and activities,

Further recognising the need to encourage national, sub-regional and regional action through a national political commitment at the highest level, and international cooperation to deal with the problems posed by pollutants entering the Convention area from land-based sources and activities,

Have agreed as follows:

Article I Definitions

For the purposes of this Protocol:

- (a) "Convention" means the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (Cartagena de Indias, Colombia, March 1983);
- (b) "Organisation" means the United Nations Environment Programme as referred to in Article 2(2) of the Convention;
- (c) "Pollution of the Convention area" means the introduction by humans, directly or indirectly, of substances or energy into the Convention area, which results or is likely to result in such deleterious effects as harm to living resources and marine ecosystems, hazards to human health, hindrance to marine activities, including fishing and other legitimate uses of the sea, impairment of quality for use of sea water and reduction of amenities;
- (d) "Land-based sources and activities" means those sources and activities causing pollution of the Convention area from coastal disposal or from discharges that emanate from rivers, estuaries, coastal establishments, outfall structures, or other sources on the territory of a Contracting Party, including atmospheric deposition originating from sources located on its territory;
- (e) "Most Appropriate Technology" means the best of currently available techniques, practices, or methods of operation to prevent, reduce or control pollution of the Convention area that are appropriate to the social, economic, technological, institutional, financial, cultural and environmental conditions of a Contracting Party or Parties; and
- (f) "Monitoring" means the periodic measurement of environmental quality indicators.

Article II General Provisions

1. Except as otherwise provided in this Protocol, the provisions of the Convention relating to its protocols shall apply to this Protocol.
2. In taking measures to implement this Protocol, the Contracting Parties shall fully respect the sovereignty, sovereign rights and jurisdiction of other States, in accordance with international law.

Article III General Obligations

1. Each Contracting Party shall, in accordance with its laws, the provisions of this Protocol, and international law, take appropriate measures to prevent, reduce and control pollution of the Convention area from land-based sources and activities, using for this purpose the best practicable means at its disposal and in accordance with its capabilities.
2. Each Contracting Party shall develop and implement appropriate plans, programmes and measures. In such plans, programmes and measures, each Contracting Party shall adopt effective means of preventing, reducing or controlling pollution of the Convention area from land-based sources and activities on its territory, including the use of most appropriate technology and management approaches such as integrated coastal area management.
3. Contracting Parties shall, as appropriate, and having due regard to their laws and their individual social, economic and environmental characteristics and the characteristics of a specific area or subregion, jointly develop subregional and regional plans, programmes and measures to prevent, reduce and control pollution of the Convention area from land-based sources and activities.

Article IV Annexes

1. The Contracting Parties shall address the source categories, activities and associated pollutants of concern listed in Annex I to this Protocol through the progressive development and implementation of additional annexes for those source categories, activities, and associated pollutants of concern that are determined by the Contracting Parties as appropriate for regional or sub-regional action. Such annexes shall, as appropriate, include *inter alia*:

- (a) effluent and emission limitations and/or management practices based on the factors identified in Annex II to this Protocol; and
- (b) timetables for achieving the limits, management practices and measures agreed by the Contracting Parties.

2. In accordance with the provisions of the annexes to which it is party, each Contracting Party shall take measures to prevent, reduce and control pollution of the Convention area from the source categories, activities and pollutants addressed in annexes other than Annexes I and II to this Protocol.

3. The Contracting Parties may also develop such additional annexes as they may deem appropriate, including an annex to address water quality criteria for selected priority pollutants identified in Annex I to this Protocol.

Article V

Cooperation and Assistance

1. Contracting Parties shall cooperate, bilaterally or, where appropriate, on a sub-regional, regional or global basis or through competent organisations in the prevention, reduction and control of pollution of the Convention area from land-based sources and activities.

2. In carrying out the obligations provided for in paragraph 1 above, Contracting Parties shall promote cooperation in the following areas:

- (a) monitoring activities undertaken in accordance with Article VI;
- (b) research on the chemistry, fate, transport and effects of pollutants;
- (c) exchange of scientific and technical information;
- (d) identification and use of most appropriate technologies applicable to the specific source categories, activities and pollutants identified in Annex I to this Protocol; and
- (e) research and development of technologies and practices for the implementation of this Protocol.

3. Contracting Parties shall promote cooperation, directly or through competent sub-regional, regional and global organisations, with those Contracting Parties which request it in obtaining assistance for the implementation of this Protocol particularly to:

- (a) develop scientific, technical, educational and public awareness programmes to prevent, reduce and control pollution of the Convention area from land-based sources and activities in accordance with this Protocol;
- (b) train scientific, technical and administrative personnel;
- (c) provide technical advice, information and other assistance necessary to address the source categories, activities and pollutants identified in Annex I to this Protocol; and
- (d) identify and approach potential sources of financing for projects necessary to implement this Protocol.

Article VI Monitoring and Assessment Programmes

1. Each Contracting Party shall formulate and implement monitoring programmes, as appropriate, in accordance with the provisions of this Protocol and relevant national legislation. Such programmes may, *inter alia*:
 - (a) systematically identify and assess patterns and trends in the environmental quality of the Convention area; and
 - (b) assess the effectiveness of measures taken to implement the Protocol.
2. Monitoring information shall be made available to the Scientific, Technical and Advisory Committee to facilitate the work of the Committee, as provided in Article XIV.
3. These programmes should avoid duplication of other programmes, particularly of similar regional programmes carried out by competent international organisations.

Article VII Environmental Impact Assessment

1. The Contracting Parties shall develop and adopt guidelines concerning environmental impact assessments, and review and update those guidelines as appropriate.
2. When a Contracting Party has reasonable grounds to believe that a planned land-based activity on its territory, or a planned modification to such an activity, which is subject to its regulatory control in accordance with its laws, is likely to cause substantial pollution of, or significant and harmful changes to, the Convention area, that Contracting Party shall, as far as practicable, review the potential effects of such activity on the Convention area, through means such as an environmental impact assessment.
3. Decisions by the competent government authorities with respect to land-based activities, referred to in paragraph 2 above, should take into account any such review.
4. Each Contracting Party shall, subject to its domestic law and regulations, seek the participation of affected persons in any review process conducted pursuant to paragraph 2 above, and, where practicable, publish or make available relevant information obtained in this review.

Article VIII Development of Information Systems

The Contracting Parties shall cooperate directly or through relevant sub-regional, regional and, where appropriate, global organisations to develop information systems and networks for the exchange of information to facilitate the implementation of this Protocol.

Article IX Transboundary Pollution

Where pollution from land-based sources and activities originating from any Contracting Party is likely to affect adversely the coastal or marine environment of one or more of the other Contracting Parties, the Contracting Parties concerned shall use their best efforts to consult at the request of any affected Contracting Party, with a view to resolving the issue.

Article X Participation

Each Contracting Party shall, in accordance with its national laws and regulations, promote public access to relevant information and documentation concerning pollution of the Convention area from land-based sources and activities and the opportunity for public participation in decision-making processes concerning the implementation of this Protocol.

Article XI Education and Awareness

The Contracting Parties shall develop and implement individually and collectively programmes on environmental education and awareness for the public related to the need to prevent, reduce and control pollution of the Convention area from land-based sources and activities, and shall promote the training of individuals involved in such prevention, reduction and control.

Article XII Reporting

1. The Contracting Parties shall submit reports to the Organisation containing information on measures adopted, results obtained and any difficulties experienced in the implementation of this Protocol. These reports should include, whenever possible, information on the state of the Convention area. The Meeting of the Contracting Parties shall determine the nature of the information to be included, and the collection, presentation and timing of these reports, which will be made available to the public with the exception of information submitted in accordance with paragraph 3 below.

2. The Scientific, Technical and Advisory Committee shall use the data and information contained in these national reports to prepare regional reports on the implementation of this Protocol, including the state of the Convention area. The regional reports shall be submitted to the Contracting Parties in accordance with Article XIV.

3. Information provided pursuant to paragraphs 1 and 2 above, that is designated by a Contracting Party as confidential, shall be used for the purposes referred to in paragraph 2 above in such a manner that assures its confidentiality.

4. Nothing in this Protocol shall require a Contracting Party to supply information the disclosure of which is contrary to the essential interests of its security.

Article XIII Institutional Mechanisms

1. Each Contracting Party shall designate a focal point to serve as liaison with the Organisation on the technical aspects of the implementation of this Protocol.

2. The Contracting Parties designate the Organisation to carry out the following Secretariat functions:

- (a) convene and service the meetings of the Contracting Parties;
- (b) assist in raising funds as provided for in Article XVI;
- (c) provide such assistance that the Scientific, Technical and Advisory Committee may require to carry out its functions as referred to in Article XIV;
- (d) provide the appropriate assistance as may be identified by the Contracting Parties to facilitate:
 - (i) the development and implementation of the plans, programmes and measures necessary to achieve the objectives of this Protocol;
 - (ii) the development of incentive programmes to implement this Protocol;
 - (iii) the development of information systems and networks for the exchange of information for the purposes of facilitating the implementation of this Protocol, as referred to in Article VIII; and
 - (iv) the development and implementation of environmental education, training and public awareness programmes, as referred to in Article XI;
- (e) communicate and work with the Caribbean Environment Programme on activities relevant to the implementation of this Protocol;
- (f) prepare common formats as directed by the Contracting Parties to be used as the basis for notifications and reports to the Organisation, as provided in Article XII;
- (g) establish and update databases on national, sub-regional and regional measures adopted for the implementation of this Protocol, including any other pertinent information, in keeping with the provisions of Articles III and XII;

- (h) compile and make available to the Contracting Parties reports and studies which may be required for the implementation of this Protocol or as requested by them;
- (i) cooperate with relevant international organisations;
- (j) provide to the Contracting Parties a report which shall include a draft budget for the coming year and an audited revenue and expenditure statement of the preceding year; and
- (k) carry out any other functions assigned to it by the Contracting Parties.

Article XIV

Scientific, Technical and Advisory Committee

1. A Scientific, Technical and Advisory Committee is hereby established.
2. Each Contracting Party shall designate as its representative to the Committee an expert in the fields covered by this Protocol, who may be accompanied at its meetings by other experts and advisors also designated by the Contracting Party. The Committee may request scientific and technical advice from competent experts and organisations.
3. The Committee shall be responsible for reporting to and advising the Contracting Parties regarding the implementation of this Protocol. To carry out this function the Committee shall:
 - (a) review on a regular basis the annexes to this Protocol as well as the state of pollution of the Convention area from land-based sources and activities and, where necessary, recommend amendments or additional annexes for consideration by the Contracting Parties;
 - (b) examine, assess and analyze the information submitted by the Contracting Parties in accordance with Articles VI and XII and other relevant information to determine the effectiveness of the measures adopted to implement this Protocol, and submit regional reports to the Contracting Parties on the state of the Convention area. The regional reports shall set forth an assessment of the effectiveness and the socio-economic impact of measures adopted to implement the Protocol, and may propose any other appropriate measures;
 - (c) provide advice to the Contracting Parties for the preparation and updating of information, including national inventories on marine pollution from land-based sources and activities;

- (d) provide guidance to the Contracting Parties:
 - (i) on measures and methodologies to assess pollution loads in the Convention area, and to ensure regional compatibility in data; and
 - (ii) on the development of plans, programmes and measures for the implementation of this Protocol;
- (e) advise on the formulation of common criteria, guidelines and standards for the prevention, reduction and control of pollution of the Convention area from land-based sources and activities;
- (f) propose priority measures for scientific and technical research and management of pollution from land-based sources and activities as well as for control, management practices and monitoring programmes, bearing in mind regional trends and conditions and any information available;
- (g) provide scientific and technical advice to the Meeting of the Contracting Parties regarding proposals for technical assistance;
- (h) formulate programmes on environmental education and awareness related to this Protocol;
- (i) develop a draft budget for the operation of the Scientific, Technical and Advisory Committee and submit it to the Contracting Parties for approval; and
- (j) carry out any other function related to the implementation of this Protocol which is assigned to it by the Contracting Parties.

4. The Committee shall adopt Rules of Procedure.

Article XV Meetings of the Contracting Parties

1. The ordinary meetings of the Contracting Parties to this Protocol shall generally be held in conjunction with the ordinary meetings of the Contracting Parties to the Convention held pursuant to Article 16 of the Convention. The Contracting Parties may also hold extraordinary meetings as deemed necessary, upon the request of the Organisation or at the request of any Contracting Party, provided that such requests are supported by the majority of the Contracting Parties. The meetings shall be governed by the Rules of Procedure adopted pursuant to Article 20 of the Convention.

2. It shall be the function of the meetings of the Contracting Parties to this Protocol to:

- (a) keep under review the implementation of this Protocol and the effectiveness of actions taken pursuant to it;
- (b) consider proposed amendments to this Protocol, including additional annexes, with a view to their subsequent adoption in accordance with the procedures established in the Convention and this Protocol;
- (c) approve the expenditure of funds identified in Article XVI that are not otherwise designated for a specific project by the donors;
- (d) review and adopt, as appropriate, regional reports developed by the Scientific, Technical and Advisory Committee in accordance with Articles XII and XIV as well as other information that a Contracting Party may transmit to the Meeting of the Contracting Parties;
- (e) take appropriate action with regard to the recommendations of the Scientific, Technical and Advisory Committee;
- (f) promote and facilitate, directly or through the Organisation, the exchange of information, experience and expertise and any other type of exchange between the Contracting Parties in accordance with Article V; and
- (g) conduct such other business as appropriate.

Article XVI Funding

1. In addition to the financial participation by the Contracting Parties in accordance with Article 20, paragraph 2 of the Convention, the Organisation may, in response to requests from Contracting Parties, seek additional funds or other forms of assistance for activities related

to this Protocol. These funds may include voluntary contributions for the achievement of specific objectives of this Protocol made by the Contracting Parties, other governments and government agencies, international organisations, non-governmental organisations, the private sector and individuals.

2. The Contracting Parties, taking into account their capabilities, shall endeavour as far as possible to ensure that adequate financial resources are available for the formulation and implementation of projects and programmes necessary to implement this Protocol. To this end, the Contracting Parties shall:

- (a) promote the mobilisation of substantial financial resources, including grants and concessional loans, from national, bilateral and multilateral funding sources and mechanisms, including multilateral financial institutions; and
- (b) explore innovative methods and incentives for mobilising and channeling resources, including those of foundations, non-governmental organisations and other private sector entities.

3. In keeping with its development priorities, policies and strategies, each Contracting Party undertakes to mobilise financial resources to implement its plans, programmes and measures pursuant to this Protocol.

Article XVII

Adoption and Entry into Force of New Annexes and Amendments to Annexes

1. Except as provided in paragraphs 2 and 3 below, the adoption and entry into force of new annexes and amendments to annexes to this Protocol shall take place in accordance with paragraphs 2 and 3 of Article 19 of the Convention.

2. The Contracting Parties may, at the time of adoption of any amendment to an annex, decide by a three-fourths majority vote of the Contracting Parties present and voting, that such amendment is of such importance that it shall enter into force in accordance with paragraphs 5 and 6 of Article 18 of the Convention.

3. With respect to any Contracting Party that has made a declaration with respect to new annexes in accordance with Article XVIII, such annex shall enter into force on the thirtieth day after the date of deposit with the Depository of its instrument of ratification, acceptance, approval or accession with respect to such annexes.

Article XVIII
Ratification, Acceptance, Approval and Accession

1. This Protocol, including Annexes I to IV, shall be subject to ratification, acceptance, approval or accession as provided by Articles 26 and 27 of the Convention.

2. In its instrument of ratification, acceptance, approval or accession, any State or regional economic integration organisation may declare that any new annex shall enter into force for it only upon the deposit of its instrument of ratification, acceptance, approval or accession thereto.

3. Following entry into force of this Protocol, any new Contracting Party to this Protocol may, at the time of acceding, declare that such accession does not apply to any annex, other than Annexes I to IV.

Article XIX
Signature

This Protocol shall be open for signature at Oranjestad, Aruba on 6 October 1999, and at Santa Fe de Bogotá, Republic of Colombia, from 7 October 1999 to 6 October 2000, by any Party to the Convention.

IN WITNESS WHEREOF the undersigned, being duly authorized by their respective Governments, have signed this Protocol.

DONE AT Oranjestad, Aruba, this 6 October 1999, in a single copy in the English, French and Spanish languages, the three texts being equally authentic.

ANNEX I

Source Categories, Activities and Associated Pollutants of Concern

A. Definitions

For the purposes of subsequent Annexes:

1. "Point Sources" means sources where the discharges and releases are introduced into the environment from any discernable, confined and discrete conveyance, including but not limited to pipes, channels, ditches, tunnels, conduits or wells from which pollutants are or may be discharged; and
2. "Non-Point Sources" means sources, other than point sources, from which substances enter the environment as a result of land run-off, precipitation, atmospheric deposition, drainage, seepage or by hydrologic modification.

B. Priority Source Categories and Activities Affecting the Convention Area

The Contracting Parties shall take into account the following priority source categories and activities when formulating regional and, as appropriate, sub-regional plans, programmes and measures for the prevention, reduction and control of pollution of the Convention area:

Domestic Sewage

Agricultural Non-Point Sources

Chemical Industries

Extractive Industries and Mining

Food Processing Operations

Manufacture of Liquor and Soft Drinks

Oil Refineries

Pulp and Paper Factories

Sugar Factories and Distilleries

Intensive Animal Rearing Operations

C. Associated Pollutants of Concern

1. Primary Pollutants of Concern

The Contracting Parties shall consider, taking into account the recommendations and other work of relevant international organisations, the following list of pollutants of concern, which were identified on the basis of their hazardous or otherwise harmful characteristics, when formulating effluent and emission limitations and management practices for the sources and activities in this Annex:

- (a) Organohalogen compounds and substances which could result in the formation of these compounds in the marine environment;
- (b) Organophosphorus compounds and substances which could result in the formation of these compounds in the marine environment;
- (c) Organotin compounds and substances which could result in the formation of these compounds in the marine environment;
- (d) Heavy metals and their compounds;
- (e) Crude petroleum and hydrocarbons;
- (f) Used lubricating oils;
- (g) Polycyclic aromatic hydrocarbons;
- (h) Biocides and their derivatives;
- (i) Pathogenic micro-organisms;
- (j) Cyanides and fluorides;
- (k) Detergents and other non-biodegradable surface tension substances;
- (l) Nitrogen and phosphorus compounds;
- (m) Persistent synthetic and other materials, including garbage, that float, flow or remain in suspension or settle to the bottom and affect marine life and hamper the uses of the sea;
- (n) Compounds with hormone-like effects;
- (o) Radioactive substances;
- (p) Sediments; and

- (q) Any other substance or group of substances with one or more of the characteristics outlined in paragraph 2 below.

2. Characteristics and Other Factors To Be Considered in Evaluating Additional Pollutants of Concern

The Contracting Parties should, taking into account the recommendations and other work of relevant international organisations, consider the following characteristics and factors, where relevant, in evaluating potential pollutants of concern other than those listed in paragraph 1 above:

- (a) Persistency;
- (b) Toxicity or other harmful properties (for example, carcinogenic, mutagenic and teratogenic properties);
- (c) Bio-accumulation;
- (d) Radioactivity;
- (e) Potential for causing eutrophication;
- (f) Impact on, and risks to, health;
- (g) Potential for migration;
- (h) Effects at the transboundary level;
- (i) Risk of undesirable changes in the marine ecosystem, irreversibility or durability of effects;
- (j) Negative impacts on marine life and the sustainable development of living resources or on other legitimate uses of the seas; and
- (k) Effects on the taste or smell of marine products intended for human consumption or effects on the smell, colour, transparency or other characteristics of the water in the marine environment.

ANNEX II

Factors To Be Used in Determining Effluent and Emission Source Controls and Management Factors

A. The Contracting Parties, when developing sub-regional and regional source-specific effluent and emission limitations and management practices pursuant to Article IV of this Protocol, shall evaluate and consider the following factors:

1. Characteristics and Composition of the Waste
 - (a) Type and size of waste source (for example, industrial process);
 - (b) Type and form of waste (origin, physical, chemical and biological properties, average composition);
 - (c) Physical state of waste (solid, liquid, sludge, slurry);
 - (d) Total quantity (units discharged, for example, per year or per day);
 - (e) Discharge frequency (continuous, intermittent, seasonally variable, etc.);
 - (f) Concentration with respect to major constituents contained in the wastes emanating from the source or activity; and
 - (g) Interaction with the receiving environment.
2. Characteristics of the Activity or Source Category
 - (a) Performance of existing technologies and management practices, including indigenous technologies and management practices;
 - (b) Age of facilities, as appropriate; and
 - (c) Existing economic, social and cultural characteristics.
3. Alternative Production, Waste Treatment Technologies or Management Practices
 - (a) Recycling, recovery and reuse opportunities;
 - (b) Less hazardous or non-hazardous raw material substitution;
 - (c) Substitution of cleaner alternative activities or products;
 - (d) Economic, social and cultural impacts of alternatives, activities or products;

- (e) Low-waste or totally clean technologies or processes; and
- (f) Alternative disposal activities (for example, land application).

B. Pursuant to Article IV of this Protocol, each Contracting Party shall, at a minimum, apply the effluent and emission source controls and management practices set out in subsequent annexes. A Contracting Party may impose more stringent source controls or management practices. To determine if more stringent limitations are appropriate, a Contracting Party should also take into account characteristics of the discharge site and receiving marine environment, including:

1. Hydrographic, meteorological, geographical and topographical characteristics of the coastal areas;
2. Location and type of the discharge (outfall, canal outlet, gullies, etc.) and its relation to sensitive areas (such as swimming areas, reef systems, sea grass beds, spawning, nursery and fishing areas, shellfish grounds and other areas that are particularly sensitive) and other discharges;
3. Initial dilution achieved at the point of discharge into the receiving marine environment;
4. Dispersion characteristics (due to currents, tides and wind) that may affect the horizontal transport and vertical mixing of the affected waters;
5. Receiving water characteristics with respect to the physical, chemical, biological and ecological conditions in the discharge area; and
6. Capacity of the receiving marine environment to assimilate waste discharges.

C. The Contracting Parties shall keep the source controls and management practices set out in subsequent annexes under review. They shall consider that:

1. If the reduction of inputs resulting from the use of the effluent and emission limitations and management practices established in accordance with this Annex do not lead to environmentally acceptable results, the effluent and emission limitations or management practices may need to be revised; and
2. The appropriate effluent and emission limitations and management practices for a particular source or activity may change with time in light of technological advances, economic and social factors, as well as changes in scientific knowledge and understanding.

ANNEX III

Domestic Wastewater

A. Definitions

For the purposes of this Annex:

1. "Domestic wastewater" means all discharges from households, commercial facilities, hotels, septage and any other entity whose discharge includes the following:
 - (a) Toilet flushing (black water);
 - (b) Discharges from showers, wash basins, kitchens and laundries (grey water); or
 - (c) Discharges from small industries, provided their composition and quantity are compatible with treatment in a domestic wastewater system.

Small quantities of industrial waste or processed wastewater may also be found in domestic wastewater. (See Part D - Industrial Pretreatment.)

2. "Class I waters" means waters in the Convention area that, due to inherent or unique environmental characteristics or fragile biological or ecological characteristics or human use, are particularly sensitive to the impacts of domestic wastewater. Class I waters include, but are not limited to:
 - (a) waters containing coral reefs, seagrass beds, or mangroves;
 - (b) critical breeding, nursery or forage areas for aquatic and terrestrial life;
 - (c) areas that provide habitat for species protected under the Protocol Concerning Specially Protected Areas and Wildlife to the Convention (the SPAW Protocol);
 - (d) protected areas listed in the SPAW Protocol; and
 - (e) waters used for recreation.
3. "Class II waters" means waters in the Convention area, other than Class I waters, that due to oceanographic, hydrologic, climatic or other factors are

less sensitive to the impacts of domestic wastewater and where humans or living resources that are likely to be adversely affected by the discharges are not exposed to such discharges.

4. "Existing domestic wastewater systems" means, with respect to a particular Contracting Party, publicly or privately owned domestic wastewater collection systems, or collection and treatment systems, that were constructed prior to entry into force of this Annex for such Contracting Party.
5. "New domestic wastewater systems" means, with respect to a particular Contracting Party, publicly or privately owned domestic wastewater collection systems, or collection and treatment systems, that were constructed subsequent to entry into force of this Annex for such Contracting Party, and includes existing domestic wastewater systems which have been subject to substantial modifications after such entry into force.
6. "Household systems" means on-site domestic wastewater disposal systems for homes and small commercial businesses in areas of low population density, or where centralised collection and treatment systems of domestic wastewater are not economically or technologically feasible. Household systems include, but are not limited to, septic tanks and drain fields or mounds, holding tanks, latrines and bio-digesting toilets.
7. "Wastewater collection systems" means any collection or conveyance system designed to collect or channel domestic wastewater from multiple sources.

B. Discharge of Domestic Wastewater

1. Each Contracting Party shall:
 - (a) Consistent with the provisions of this Annex, provide for the regulation of domestic wastewater discharging into, or adversely affecting, the Convention area;
 - (b) To the extent practicable, locate, design and construct domestic wastewater treatment facilities and outfalls such that any adverse effects on, or discharges into, Class I waters, are minimised;
 - (c) Encourage and promote domestic wastewater reuse that minimises or eliminates discharges into, or discharges that adversely affect, the Convention area;
 - (d) Promote the use of cleaner technologies to reduce discharges to a minimum, or to avoid adverse effects within the Convention area; and

- (e) Develop plans to implement the obligations in this Annex, including, where appropriate, plans for obtaining financial assistance.
2. Each Contracting Party shall be entitled to use whatever technology or approach that it deems appropriate to meet the obligations specified in Part C of this Annex.

C. Effluent Limitations

Each Contracting Party shall ensure that domestic wastewater that discharges into, or adversely affects, the Convention area, is treated by a new or existing domestic wastewater system whose effluent achieves the effluent limitations specified below in paragraphs 1, 2 and 3 of this Part, in accordance with the following timetable:

Category	Effective Date of Obligation (in years after entry into force for the Contracting Party)	Effluent Sources
1	0	All new domestic wastewater systems
2	10	Existing domestic wastewater systems other than community wastewater systems
3	10*	Communities with 10,000 - 50,000 inhabitants
4	15	Communities with more than 50,000 inhabitants already possessing wastewater collection systems
5	20	Communities with more than 50,000 inhabitants not possessing wastewater collection systems
6	20	All other communities except those relying exclusively on household systems
* Contracting Parties which decide to give higher priority to categories 4 and 5 may extend their obligations pursuant to category 3 to twenty (20) years (time frame established in category 6).		

1. Discharges into Class II Waters

Each Contracting Party shall ensure that domestic wastewater that discharges into, or adversely affects, Class II waters is treated by a new or existing domestic wastewater system whose effluent achieves the following effluent limitations based on a monthly average:

Parameter	Effluent Limit
Total Suspended Solids	150 mg/l*
Biochemical Oxygen Demand (BOD ₅)	150 mg/l
pH	5-10 pH units
Fats, Oil and Grease	50 mg/l
Floatables	not visible
* Does not include algae from treatment ponds	

2. Discharges into Class I Waters

Each Contracting Party shall ensure that domestic wastewater that discharges into, or adversely affects, Class I waters is treated by a new or existing domestic wastewater system whose effluent achieves the following effluent limitations based on a monthly average:

Parameter	Effluent Limit
Total Suspended Solids	30 mg/l*
Biochemical Oxygen Demand (BOD ₅)	30 mg/l
pH	5-10 pH units
Fats, Oil and Grease	15 mg/l
Faecal Coliform (Parties may meet effluent limitations either for faecal coliform or for <i>E. coli</i> (freshwater) and enterococci (saline water).)	Faecal Coliform: 200 mpn/100 ml; or a. <i>E. coli</i> : 126 organisms/100ml; b. enterococci: 35 organisms/100 ml
Floatables	not visible
* Does not include algae from treatment ponds	

3. All Discharges

- (a) Each Contracting Party shall take into account the impact that total nitrogen and phosphorus and their compounds may have on the degradation of the Convention area and, to the extent practicable, take appropriate measures to control or reduce the amount of total nitrogen and phosphorus that is discharged into, or may adversely affect, the Convention area.
- (b) Each Party shall ensure that residual chlorine from domestic wastewater treatment systems is not discharged in concentrations or amounts that would be toxic to marine organisms that reside in or migrate to the Convention area.

D. Industrial Pretreatment

Each Contracting Party shall endeavour, in keeping with its economic capabilities, to develop and implement industrial pretreatment programmes to ensure that industrial discharges into new and existing domestic wastewater treatment systems:

- (a) do not interfere with, damage or otherwise prevent domestic wastewater collection and treatment systems from meeting the effluent limitations specified in this Annex;
- (b) do not endanger operations of, or populations in proximity to, collection and treatment systems through exposure to toxic and hazardous substances;
- (c) do not contaminate sludges or other reusable products from wastewater treatment; and
- (d) do not contain toxic pollutants in amounts toxic to human health and/or aquatic life.

Each Contracting Party shall endeavour to ensure that industrial pretreatment programmes include spill containment and contingency plans.

Each Contracting Party, within the scope of its capabilities, shall promote appropriate industrial wastewater management, such as the use of recirculation and closed loop systems, to eliminate or minimise wastewater discharges to domestic wastewater systems.

E. Household Systems

Each Contracting Party shall strive to, as expeditiously, economically and technologically feasible, in areas without sewage collection, ensure that household systems are constructed, operated and maintained to avoid contamination of surface or ground waters that are likely to adversely affect the Convention area.

For those household systems requiring septage pump out, each Contracting Party shall strive to ensure that the septage is treated through a domestic wastewater system or appropriate land application.

F. Management, Operations and Maintenance

Each Contracting Party shall ensure that new and existing domestic wastewater systems are properly managed and that system managers develop and implement training programmes for wastewater collection and treatment system operators. Managers and operators shall have access to operators' manuals and technical support necessary for proper system operation.

Each Contracting Party shall provide for an evaluation of domestic wastewater systems by competent national authorities to assess compliance with national regulations.

G. Extension Period

1. Any Contracting Party may, at least two years before the effective date of an obligation in categories 2, 3, 4 or 5 of the timetable in Part C above, submit to the Organisation a declaration that, with respect to such category, it is unable to achieve the effluent limitations set forth in paragraphs 1 and 2 of Part C above in accordance with that timetable, provided that such Contracting Party:
 - (a) has developed action plans pursuant to Part B, paragraph 1(e);
 - (b) has achieved the effluent limitations for a subset of the discharges associated with those categories, or a reduction of at least 5 percent of total loading of pollutants associated with those categories; and

- (c) has taken actions to achieve those effluent limitations, but has been unable to achieve those limitations due to a lack of financial or other capacity.
- 2. With respect to a Contracting Party that has submitted a declaration pursuant to paragraph 1 above, the effective date of an obligation in the timetable in Part C for categories 2, 3, 4 or 5 of that timetable shall be extended for a period of five years. The five-year period shall be extended for a maximum of one additional five-year period if the Contracting Party submits a new declaration prior to the expiration of the first period, and if it continues to meet the requirements set out in paragraph 1 above.
- 3. The Contracting Parties recognise that the complete fulfilment* of the obligations contained in this Annex will require the availability and accessibility of financial resources.

* In this context, the Spanish word "cumplimiento" that appears in the Spanish text shall have the meaning of the English word "fulfilment" and not "compliance".

ANNEX IV

Agricultural Non-Point Sources of Pollution

A. Definitions

For purposes of this Annex:

1. "Agricultural non-point sources of pollution" means non-point sources of pollution originating from the cultivation of crops and rearing of domesticated animals, excluding intensive animal rearing operations that would otherwise be defined as point sources; and
2. "Best management practices" means economical and achievable structural or non-structural measures designed to prevent, reduce or control the run-off of pollutants into the Convention area.

B. Plans for the Prevention, Reduction and Control of Agricultural Non-Point Sources of Pollution

Each Contracting Party shall, no later than five years after this Annex enters into force for it, formulate policies, plans and legal mechanisms for the prevention, reduction and control of pollution of the Convention area from agricultural non-point sources of pollution that may adversely affect the Convention area. Programmes shall be identified in such policies, plans and legal mechanisms to mitigate pollution of the Convention area from agricultural non-point sources of pollution, in particular, if these sources contain nutrients (nitrogen and phosphorus), pesticides, sediments, pathogens, solid waste or other such pollutants that may adversely affect the Convention area. Plans shall include *inter alia* the following elements:

1. An evaluation and assessment of agricultural non-point sources of pollution that may adversely affect the Convention area, which may include:
 - (a) an estimation of loadings that may adversely affect the Convention area;
 - (b) an identification of associated environmental impacts and potential risks to human health;
 - (c) the evaluation of the existing administrative framework to manage agricultural non-point sources of pollution;

- (d) an evaluation of existing best management practices and their effectiveness; and
 - (e) the establishment of monitoring programmes.
2. Education, training and awareness programmes, which may include:
- (a) the establishment and implementation of programmes for the agricultural sector and the general public to raise awareness of agricultural non-point sources of pollution and their impacts on the marine environment, public health and the economy;
 - (b) the establishment and implementation of programmes at all levels of education on the importance of the marine environment and the impact of pollution from agricultural activities;
 - (c) the establishment and implementation of training programmes for government agencies and the agricultural sector on the implementation of best management practices, including the development of guidance materials for agricultural workers on structural and non-structural best management practices, to prevent, reduce and control agricultural non-point sources of pollution; and
 - (d) the establishment of programmes to facilitate effective technology transfer and information exchange.
3. The development and promotion of economic and non-economic incentive programmes to increase the use of best management practices to prevent, reduce and control pollution of the Convention area from agricultural non-point sources.
4. An assessment and evaluation of legislative and policy measures, including a review of the adequacy of plans, policies and legal mechanisms directed toward the management of agricultural non-point sources and the development of a plan to implement such modifications as may be necessary to achieve best management practices.

C. Reporting

Each Contracting Party shall report on its plans for prevention, reduction and control of pollution of the Convention area from agricultural non-point sources in accordance with Article XII of this Protocol.

**PROTOCOL CONCERNING POLLUTION FROM
LAND-BASED SOURCES AND ACTIVITIES TO THE CONVENTION FOR THE
PROTECTION AND DEVELOPMENT OF THE MARINE ENVIRONMENT OF THE
WIDER CARIBBEAN REGION**

The Final Act was signed on 6 October 1999 by the following Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region:

Barbados
Republic of Colombia
Republic of Costa Rica
Republic of Cuba
Commonwealth of Dominica
Dominican Republic
Republic of France
Jamaica
United Mexican States
Kingdom of the Netherlands
Republic of Panama
St. Lucia
Republic of Trinidad and Tobago
United Kingdom of Great Britain and Northern Ireland
United States of America
Republic of Venezuela

The Protocol was signed on 6 October 1999 by the following Contracting Parties to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region:

Republic of Costa Rica
Republic of France
Kingdom of the Netherlands
United States of America

