

# Protocol concerning Pollution from Land-Based Sources and Activities (LBS Protocol)



The LBS Protocol, which was adopted in 1999 and entered into force in 2010, is one of three Protocols of the Cartagena Convention. This legal instrument consists of obligations to reduce the negative environmental and human health impacts of land-based pollution in the Wider Caribbean Region (WCR).



## AIMS

- Reduce impacts of priority pollutants by establishing sewage and emissions limits and implementing best management practices.
- Exchange scientific & technical information on land-based pollution through regional cooperation in monitoring and research.



## WHY?

The Caribbean Sea is an important natural resource for tourism, fisheries and general recreation. The associated coastal and marine ecosystems are extremely fragile and vulnerable to human activities, especially those that take place on land. Regional and national actions are urgently needed to protect these vital marine resources and overall public health in the countries of the Wider Caribbean Region.

The main sources of point or direct sources of pollution to the Caribbean Sea are:

- Domestic Sewage
- Solid Waste/Marine Litter
- Poor Agricultural Practices
- Oil refineries
- Sugar factories and distilleries
- Food processing
- Beverage manufacturing
- Pulp and paper manufacturing
- Chemical industries



## WHO?

Twelve countries have ratified/ acceded to the LBS Protocol: Antigua & Barbuda, the Bahamas, Belize, France, Guyana, Panama, Saint Lucia, Grenada, Jamaica, Trinidad & Tobago, Dominican Republic and the USA.



## HOW?

The LBS Protocol provides the legal framework for addressing pollution based on national and regional needs and priorities. The UNEP CAR/RCU Secretariat supports its Contracting Parties/Countries to:

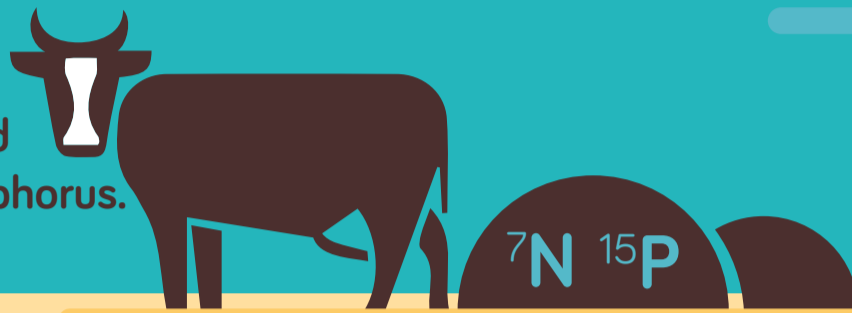
- Classify recreational water bodies based on pollution risk to human health and the environment
- Establish legally binding standards for sewage effluent and discharges
- Develop National Programmes of Action for Integrated Watershed and Coastal Area
- Identify and assess sources and activities contributing to pollution
- Develop management plans and demonstration projects to reduce marine pollution

The LBS Protocol promotes the use of Environmental Impact Assessments (EIAs), most appropriate technologies and best management practices. It further encourages the establishment of pollution standards and schedules for implementation.

**15%** of our region's reefs are threatened by wastewater discharge from cruise ships and other vessels.

**8,000,000 metric tonnes of plastic enters into the world's ocean every year** and the amounts continue to grow.

The total estimated nutrient load from land-based sources in the Caribbean Sea is **13,000 tonnes/yr of nitrogen** and **5,800 tonnes/yr of phosphorus**.



Coastal areas near to oil installations show significant **heavy metal concentrations in sediments**.

The Wider Caribbean Region (WCR) is one of the largest oil producing areas in the world, producing approx. **20,000,000 barrels per day in 2012** of which **USA produces 41.2%**.



It is estimated that **90%** of the pesticides used in the Wider Caribbean Region do not meet their intended target and a high proportion enters the marine environment via surface and drainage, runoff, erosion, misapplication and atmospheric transport.

Domestic wastewater is high in nutrients like nitrogen (N) and phosphorus (P). These nutrients are harmful to our coral reefs, mangroves, sea grass beds, fishes, marine mammals and other coastal and marine ecosystems which could eventually die.

Over **75%** of all sewage enters the Caribbean sea untreated or only partially treated.



The average global estimate of annual sediment load to the world's oceans varies from **15 to 30 billion tonnes**



from activities on land such as deforestation, unplanned development and poor agricultural practices and sources such as domestic and industrial wastewater, solid waste, sediment and toxic chemicals.



References: All facts are sourced from AMEP Fact Sheets. Visit the website link below for further information:  
<http://www.cep.unep.org/factsheets>