

Wastewater Management and Environmentally Sound Technologies



CEHI

November 2007



Mandate

- Agreement establishing CEHI 1989
- “ *provide technical advisory services to Member States in all areas of environmental management, including water supplies, **liquid waste and excreta disposal**, solid waste management, water resources management, coastal zone management including beach pollution, air pollution, occupational health, vector control, disaster prevention and preparedness, natural resources conservation, environmental institution development and the socio-economic aspects of environmental management.* ”

Mandate

- **CCH II/III: Sub-Priority Environmental Health**
 - Water Quality and Water Resources Management
 - Liquid Waste and Excreta Disposal
 - Solid Waste Management
 - Workers Health
 - Vector Control
 - Sustainable Land Management
- **Barbados Programme of Action: Water and Waste Management (Ministers of Environment, 1994)**

Programme Management

- Participate in or track regional and international EH/EM Agendas: MDGs, CCH II/III, HEMA, SIDS, OECS St. Georges Declaration, MEAS
- Track Strategies and Programme focus of Donor and Technical assistance agencies: USAID, OAS, CDB, UNEP, PAHO, UNDP, UNESCO, GTZ, FAO
- Market intelligence, requests from Member States, informal discussions

Situation

- The tourist product is based on the offering of a holiday experience premised on an unpolluted environment. The inherent contradiction is that in these small island states, with fragile ecosystems, the influx of tourists puts unsustainable pressure on the environment.
- Disposal of sewage and solid waste is a major problem because the islands are so small and do not have the capacity to handle such large transient populations.

Situation

- Tourism makes use of the marine and the terrestrial environments, which are key national assets and a main source of comparative advantage in tourism.
- In the Caribbean, these public goods are managed by governments and/or municipalities and their care is the responsibility of society as a whole: tourists, local communities and economic interests.

Situation

- Environmental indicators show clear signs of the degradation of the marine environment: e.g. coral reef bleaching, and habitat change.

Situation

- Fragile marine ecosystems are threatened. Excessive protein in coastal waters, caused by outflow from hotels and industries, has caused algae growth, spoiling the pristine beauty of beaches

Situation

- Accommodation capacity has expanded considerably over the past 25 years. Total room stock increased by 25 percent in the period 1994 – 2000.

Wastewater in the Caribbean

- A study conducted by CEHI in the 90s indicated that more than 80% of the wastewater treatment plants that were surveyed had operational problems

Wastewater in the Caribbean

- Lack of capital inflows
- Lack of regulations and monitoring regime
- Absence of trained operators
- Unwillingness of plant owners to invest in operations and maintenance
- Unwillingness to take responsibility

Wastewater in the Caribbean

- Technologies chosen that were not appropriate for the Region
- Technical support not easily available
- Lack of coordinated coastal zone monitoring programmes

Wastewater in the Caribbean

- Inadequacy of planning for new wastewater systems (community, tourism developments)
- Wastewater characteristics have changed from the traditional sewage effluent
- Many communities in the region still use buckets and traditional pit latrines

Why concentrate on wastewater management?

- Health of the population
- Quality of the environment eg coastal water quality
- Fisheries
- Tourism – tourists are becoming more interested in their environments

Why concentrate on wastewater management?

- LBS protocol
- Marpol
- Emergence of local regulations eg water pollution rules of TnT
- Increased complexity of wastewater characteristics

CEHI's activities

- Laboratory analyses of wastewater for public and private sector
- Development of directory of environmentally sound technologies
- Training of sewage treatment plant operators
- IWCAM

CEHI's activities

- Technical advise to Member States and private sector
 - Reed bed systems
 - Disposal of laundry water
 - Community systems
 - Assist in assessing wastewater treatment systems for developments through EIAs
- Evaluate new technologies to determine their appropriateness

CEHI's activities

- Hosting of bi-annual environmental forum where wastewater management is one of the focus areas
- Sewage Assessment Needs – Vieux Fort, St Lucia (based on the requirements of the LBS protocol)
 - Survey of households and business activities
 - Marine survey
 - Recommendations for wastewater treatment

Programme Focus: Integrating Watershed and Coastal Areas Management

- **Objective:** To assist countries to take mitigative action for improving potable and recreational water quality:

Activities:

- 1 Revision of the CEHI/PAHO STP Study :CEHI/PAHO
- 2. Training for Laboratory Staff of Public Health Labs in WQM: IWCAM Project (regional workshop)
- 3. Development of Water Quality Indicators: IWCAM
- 4. Development of Water Safety Plans: Pilot in Jamaica and Guyana : CDC, PAHO and the National Oceanographic and Atmospheric Administration.
- 5. Development of IWRM and Water Safety Plans IWCAM

Cleaner Production and Sustainable Consumption

- Working with SMMEs to improve their environmental performance eg agro-processors
 - Wastewater management esp dealing with high organic content

Proper (agro-)chemical management practices promoted in the region

- Promotion of agro-chemical management strategy
- Assessment and inventory of Persistent Organic Pollutants (POPs)

Partnerships

- Partnership building and collaboration at the regional level:
- CWWA,
- CAST,
- CAREC,

Partnerships

- Clean Islands,
- CANARI, CDERA, OECS
- UNEP (CAR/RCU, ROLAC, Nairobi)

Upcoming activities

- CREW
- Working with GPA to deliver comprehensive training in wastewater management (including project development) for Jamaica and also train-the-trainers

Thank you for your time!

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