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CONSULTATIVE MEETING ON MUNICIPAL WASTEWATER

REGION: **WIDER CARIBBEAN**

Ocho Ríos, Jamaica

19 - 21 February 2001



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ENGLISH, SPANISH AND FRENCH

**UNEP/GPA Regional Working Group on Municipal Wastewater:
Regional Cooperation for Innovative Action¹
Ocho Rios, Jamaica, 19 - 21 February 2001**

**CONCLUSIONS FROM THE CHAIR:
SUMMARY AND RECOMMENDATIONS**

Introduction

Domestic wastewater discharges are one of the most significant threats to sustainable coastal developments world-wide. The priority for action on “sewage”, as identified by the Global Programme of Action for the Protection of the Marine Environment from Land-based Activities (GPA), was reconfirmed by seven regional workshops of Government-designated experts organised (between 1996-1998) by the United Nations Environment Programme (UNEP) as GPA Secretariat within the framework of the Regional Seas Programme and also by UNEP's Governing Council (decision 20/19 of 1999).

The effects of individual domestic wastewater discharges are usually localised, but they are a major source of coastal and marine contamination in all regions and therefore a global issue. Pathogenic organisms in domestic wastewater-contaminated marine and estuarine waters cause massive transmissions of infectious diseases to bathers and consumers of raw and undercooked shellfish with a global economic impact recently estimated at US\$10 billion per year (GESAMP and ACOPS 2001)².

The concern for domestic wastewater in the Wider Caribbean region led to the development of a special Annex of the 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 (LBS Protocol).

¹ This workshop was organised jointly by the UNEP/GPA Coordination Office and the Regional Co-ordinating Unit of the Caribbean Environment Programme (CAR/RCU) and was held in conjunction with the First Meeting of the Interim Scientific, Technical and Advisory Committee (ISTAC) to the Protocol to the Cartagena Convention Concerning Pollution from Land-based Sources and Activities in the Wider Caribbean Region (19-23 February 2001). These Conclusions from the Chair are a slightly modified version of Annex V of the report of the ISTAC meeting.

² Joint Group of Experts on the Scientific Aspects of Marine Environmental Protection & Advisory Committee on Protection of the Sea. 2001. Protecting the oceans from land-based activities – Land-based sources and activities affecting the quality and uses of the marine, coastal and associated freshwater environment. Rep. Stud. GESAMP No. 71, 162 pp.

In response to the above, the UNEP/GPA Coordination Office, in cooperation with the World Health Organization (WHO), the United Nations Centre for Human Settlements (Habitat) and the Water Supply and Sanitation Collaborative Council (WSSCC) developed the GPA Strategic Action Plan on Municipal Wastewater (SAP) (UNEP/GPA/WGCAR.1/2). An important part of the SAP are the Recommendations for Decision-making on Municipal Wastewater (available in English, Spanish and French through the GPA clearing-house: www.gpa.unep.org/documents) and the organization of regional partnership meetings.

This meeting in the Caribbean is the first of a series of similar regional partnership meetings UNEP is planning during 2001. The result of these meetings and the experiences gained will significantly contribute to a special session dealing with the problems associated in municipal wastewater during the first intergovernmental review meeting on implementation of the GPA (Montreal, Canada, 26-30 November 2001) which is under preparation.

Mr. Gerardo Viña, from the Colombian delegation and Chair of the First Meeting of the Interim Scientific, Technical and Advisory Committee (ISTAC) to the LBS Protocol, chaired the meeting of the present Working Group. Ms. Mearle Barrett, from the Jamaican delegation, was elected as Rapporteur. The purpose of this document is to summarise the main outcomes of the discussions and to identify action to be taken by the CAR/RCU, ISTAC, Governments, the GPA Coordination Office and other partners.

The aim of the meeting was to contribute to the implementation of the LBS Protocol by providing a forum for exchanging experience and expertise and by facilitating the establishment of partnerships among stakeholders to promote national and regional action.

The particular objectives of the meeting were to:

- (i) Review the Recommendations for Decision-making on Municipal Wastewater and develop regional annexes, as appropriate, to reflect common views of stakeholders on priorities, capacities and needs;
- (ii) Exchange of experience and expertise with regard to innovative, financial, technical and institutional arrangements related to the management of municipal wastewater, and to foster partnerships;
- (iii) Identify demonstration projects which could facilitate implementation of Annex III (on domestic wastewater) of the LBA Protocol and also illustrate the application of the Recommendations for Decision-making on Municipal Wastewater; and
- (iv) Provide recommendations to the ISTAC with regard to activities to be incorporated in the 2002-2003 workplan and budget for the LBS Protocol.

The meeting was attended by representatives of national and local Governments, regional and international intergovernmental and non-governmental organisations, and the private sector (see the List of Participants in Annex 4).

Summary and Recommendations

(i) Review of the Recommendations for Decision-making on Municipal Wastewater

The Working Group welcomed the Recommendations for Decision-making on Municipal Wastewater as general guidance to wastewater management approaches worldwide. The document was considered a useful tool to facilitate implementation of Annex III of the LBS Protocol, in accordance with national policies and plans.

The meeting established three parallel *ad hoc* working groups to review a draft document submitted by the GPA Coordination Office summarising the key issues of the Recommendations for Decision-making, as follows: integrated approaches, stakeholder involvement, financial sustainability, institutional arrangements and innovative technologies. The revised draft, incorporating the changes suggested by the meeting (Annex 1), will be submitted to similar meetings being organised by the GPA Coordination Office in other Regional Seas Programmes during 2001 and to the GPA intergovernmental review meeting in November 2001.

(ii) Exchange of experience and expertise

Case studies

Five case studies, illustrating experiences with innovative financial, technical and institutional approaches related to the management of domestic wastewater in the Wider Caribbean region, were presented to the meeting (summarised in Annex 3) as follows: (i) Mr. Gonzalo Arcila (Planetary Coral Reef Foundation and ECORED, Mexico) on the use of natural systems to treat wastewater; (ii) Mr. Errol Frederick (Water and Sewerage Company, St. Lucia) on the willingness and ability of householders of connecting to sewers; (iii) Mr. Joan Borrel (Aguas de Cartagena, Colombia) on public-private partnerships with special attention to low income inhabitants; (iv) Mr. Manuel Finke (Hotel Association of Puerto Rico) on experiences of the tourism sector in wastewater management; and (v) Mr. Reinaldo Pieters (Department of Public Works, Bonaire) on wastewater management and water re-use.

The following major conclusions from the presentations and from the subsequent discussion were drawn by the meeting:

1. There are no unique or ideal solutions and thus no one single alternative can be considered in isolation.
2. There is a need to switch from the conventional approach to the sustainable approach and from short-term to a long-term vision.
3. There should be a requirement to develop and implement proper wastewater treatment systems and solid waste management solutions prior to the beginning of any dwelling and construction where human activities will take place.
4. There is a recognition of the importance of taking into account the carrying capacity of the ecosystems where wastewater is being discharged and not only the standards criteria.
5. Cost-benefit studies are important to assist decision-makers in determining priorities for investment.

6. Viable and practical solutions need to be developed in the context of local realities which integrate effluent limitations with the specific uses and objectives of the receiving waters.
7. The management of wastewater systems should be flexible to allow future adjustments, as required.
8. Willingness of users to pay fees (e.g., those for tourism) increase once the benefits are evident. It is important to ensure transparency on how the fees collected are used, e.g., towards protecting the natural resources (for instance, coral reefs).
9. The financial aspects of wastewater systems are critical in particular for developing countries and thus innovative alternatives to ensure their sustainability are required. Examples of these include a tourist tax in areas where tourism is the main economic activity as well as an important contributor to pollution, government economic incentives for the private sector, etc.
10. The civic society plays a critical role in the decision-making process.

A number of delegations brought to the attention of the meeting additional case studies dealing with domestic wastewater management in the Caribbean (e.g., British Virgin Islands, Barbados, Venezuela, Jamaica, Dominican Republic, Turks and Caicos). Participants agreed to make available to the CAR/RCU information on these and other case studies for their compilation and dissemination (see template in Annex 2, as an initial effort to begin compiling this information).

Based on the presentations and on the discussions carried out by the three *ad hoc* working groups mentioned above, the meeting identified lessons learnt in managing domestic wastewater in the region. They can be grouped in the following main categories:

A. Harmonisation

1. Need for an harmonised approach to adopt and implement regional effluent standards at the national level as reflected in Annex III of the LBS Protocol. This approach encourages the application of appropriate technologies and discourages development interests moving from territory to territory seeking lower standards/development requirements within the region.
2. Marina-related developments should be considered within the context of land-based sources and activities.
3. Need to value land differently, with the wealthy subsidising the poor to expand use of wastewater systems.
4. Need to develop appropriate methodologies for the development of management systems in small island States and larger countries with multiple river systems, varied coastlines and borders.
5. Need for a common level of regional commitment.
6. Incentive programmes have been overvalued and community commitments should be included in developing planning and approval process. Both public and private sector developments should involve the public during the process.
7. Enhancement of the public capacity to influence planning and contract approval processes (i.e., negotiating skills) needs to be developed, possibly through regional sharing of country expertise or supported by training by the World Bank, the Inter-American Development Bank (IDB) and the United Nations Development Programme (UNDP), among others.

8. Equity and cost-effectiveness are important criteria for strategic planning. It is crucial to balance the quality of the service and the investment cost.
9. Need for the political will to establish port waste reception facilities for the management of waste from ships.

B. Finance and infrastructure

1. A minimum institutional capacity is essential to utilise and implement technology.
2. Need for planners to recognise who the beneficiaries of development really are in order to take their needs into account.
3. Financial viability should be based on economic rates of return and a rate of return relating to broader economic analysis.
4. There is no quantification of environment assets (natural resource accounting) and, as a result, environmental concerns are not incorporated into financial feasibility.

C. Training

1. Programmes of technology and know-how transfer should be promoted among the countries of the region and other developed countries.
2. Training is needed to build capacity in evaluation of environmental assets, as well as in the field of environmental economics.
3. Programmes to strengthen research capacity using peer exchanges and exchange of experiences.

D. Public awareness and participation

1. Public awareness can be used to attain long term sustainability rather than short term financial or political returns. The effectiveness of marketing/education strategies aimed at involving the public in wastewater management need to be reviewed. There is a need for broad public education involving all levels.
2. Stakeholder participation is essential from the beginning of the planning process. It is important to ensure that everybody “hooks up” in the project planning.
3. Information must be available to the public. Systematic and coordinated public disclosure of information on, for example, case studies (what has worked and has not worked) is essential to enhance environmental awareness.
4. Planning processes should include mechanisms to provide connection to sewerage systems/potable water systems regardless of ability or willingness to connect.

E. Monitoring and evaluation

1. Need for projects/initiatives on wastewater management to implement long term monitoring plans. Monitoring the performance of the wastewater treatment systems is also very important.

International financing and intergovernmental organisations

In addition to the above case studies, representatives of international financing institutions and intergovernmental organisations were invited to brief the meeting on their role and activities in support of wastewater management in the Caribbean region (their presentations are summarised in Annex 3), as follows: (i) Mr. Steven Stone (Inter-American Development Bank, Jamaica Office) on the role of the IDB in financing water and wastewater management with a focus in the Caribbean; (ii) Mr. Samuel Wedderburn (World Bank, Jamaica Office) on WB's activities in the Caribbean; (iii) Mr. Gerardo Galvis (Pan-American Health Organisation/World Health Organisation, Washington, DC, USA) on PAHO's technical GPA-related cooperation activities; (iv) Mr. Harry Philippeaux (PAHO/WHO, Caribbean Region, Barbados) on considerations for PAHO's project development in wastewater management in the Caribbean; and (v) Mr. Bernhard Griesinger (Organisation of American States) on OAS' activities on water.

The following main lessons learnt and recommendations were drawn from the presentations and the ensuing discussion:

1. A strong legal and regulatory framework is essential to gain short-term financing.
2. Leverage private resources where possible (e.g., through public private partnerships).
3. Use the full range of multilateral development banks.
4. Coordinate donors and lenders to achieve long term goals.
5. Involve major stakeholders on decision-making processes.
6. Need to ensure proper collection of data and information as a basis for adoption of regulatory measures.
7. Need to make available relevant and credible information to decision-makers and the civic society at the national and local level.
8. Water services should be planned based on their sustainability.
9. Develop alliances with Ministries of Finance and Planning.
10. It is highly important that decision-makers be informed of the financing process of the development banks. It is also important that each sector coordinates within its own country to identify its priorities, make them known and get their government to include them on their list of priorities, at a national level.
11. Since the development banks have requirements regarding legal aspects and the LBS Protocol offers very good guarantees to these institutions, there is a strong argument in favour of ratifying the Protocol as soon as possible.
12. Need for donor countries to focus their attention in supporting the efforts of recipient countries in implementing management approaches in accordance with their own policies and needs.

(iii) Identification of demonstration projects

The Working Group agreed that the results of the two ongoing pilot studies (pilot projects in sewage treatment needs assessments; and on implementation of Annex III of the LBS Protocol) would be an input from the region to the 2001 GPA intergovernmental review meeting.

(iv) Recommendations to ISTAC³

1. The Working Group recommends that ISTAC requests the CAR/RCU, in cooperation with the GPA Coordination Office and the WHO/Pan-American Health Organisation, to (i) compile information on past and current projects and initiatives in the region which could be useful as case studies on wastewater management; (ii) summarise main lessons learnt from these case studies; and (iii) make this information available to all Caribbean countries (e.g., through hard copies and the clearing-house mechanism) before the end of 2001. This analysis and resulting recommendations could be an additional contribution from the Caribbean region to the 2001 GPA intergovernmental review meeting.

2. The Working Group recommends that ISTAC requests the CAR/RCU to prepare draft project proposals to implement the next phases of the ongoing pilot projects (sewage treatment needs assessment; and implementation of Annex III of the LBS Protocol), to be brought forward to the 2001 GPA review meeting for possible financing.

³ These recommendations were endorsed by ISTAC, which also requested the CAR/RCU and the GPA Coordination Office to bring the present report to the attention of the 2001 GPA intergovernmental review meeting.