

# **Recommendations from the Workshop on Sewage and Sludge Management – Environmental and Public Health Considerations**

**Workshop held on 29th - 30th March 2006 at Regency Hotel**

**The Pan American Health Organization and United Nations Environmental Program in collaboration with the Ministry of Health and Environmental Protection Agency carried out a workshop on Sewage and Sludge Management, Environment and Public Health.**

**The objective of the workshop was to recognize the on-site sanitation with a sanitary safe and low cost solution which contributes to both the MDG and to the Land Based Source of Pollution Protocol. The workshop also aimed to facilitate knowledge-exchange regarding to wastewater and sludge management and their implication to the public health and environment.**

## **Workshop Outcomes**

**Discussion Questions – considerations should be for both the rural and urban areas.**

- 1. What are the main technical barriers and constraints to the effective management of sanitation, sewerage and wastewater collection, treatment and disposal in Guyana?**
- 2. How can the international and regional commitments (MDGs and LBS protocol) be more effectively promoted and used to assist national agencies to improve sanitation and the management of sewage and wastewater in Guyana?**
- 3. Role of UNEP and PAHO in assisting to have wastewater and sanitation management high on the political agenda – accession and implementation of relevant protocols and agreements.**

## **Recommendations**

- 1. What are the main technical barriers and constraints to the effective management of sanitation, sewerage and wastewater collection, treatment and disposal in Guyana?**

## **Financing Barriers:**

- 1. Financing: for the expansion and maintenance of the existing sewer system in Georgetown (by Guyana Water Inc). – The system is old and is being overloaded by an ever increasing population. The capacity of the pumps to off-take the expanded load.**
- 2. Affordability of residents to pay or construct the septic tanks**
- 3. Lack of sewage treatment system**
- 4. System coverage is too small**

5. Lack of preventative maintenance
6. Inadequately designed systems to cut cost

**Human Resource Barriers:**

7. Lack of proper skills in the area.
8. Brain-drain issues.

**Institutional and Regional Barriers:**

9. Lack of institutional cooperation and coordination
10. Lack of regional cooperation, information sharing.
11. Lack of data to assess levels of damage or estimation of levels of pollution.

**Cultural Barriers:**

12. In terms of types and designs. Preference to use the latrines or 'bush' rather than to pay for septic tanks or sewage system or treatment plants.
13. Misuse of sewage system (SWM)

**Educational Barriers:**

14. Lack of awareness especially in terms of environmental and health related issues

**Regulatory Barriers:**

15. Lack of proper zoning especially in Hinterland areas.
16. No controls or monitoring materials which enters into the system.
17. Lack of enforcement.
18. Overlapping roles based on legislation.
19. Fines are not adequate – outdated legislation

**Standards and Guideline Barriers:**

20. Lack of national standards
21. Lack of monitoring and enforcement of building codes
22. Lack of a national waste management plan

2. **How can the international and regional commitments (MDGs and LBS protocol etc) be more effectively promoted and used to assist national agencies to improve sanitation and the management of sewage and wastewater in Guyana?**

**Educational Strategies:**

1. Information system should also be accessible to the public. Awareness programs:
  - target the education system
  - lectures
  - television and radio spots
  - drama

- workshops
  - jingles
  - internet, websites
2. There is a need to market the protocol, e.g. tell people about consequences of not signing and benefits that can be earned.
  3. Solicit public participation in proposing solutions, e.g. maybe through competitions, through the arts, debating in schools etc.
  4. Town hall meetings can be great for feedback. This can also give the opportunity to do an assessment of public's knowledge base.
  5. Yearly reports on achievements to keep the public informed of status of MDGs and protocols.
  6. MoU between Ministry of Health and Education to develop program to integrate into curriculum.
  7. Initiate public awareness programs with communities with cooperation from NGOs, e.g. debating competitions in schools.
  8. Spread awareness in the Hinterland, transient and permanent communities.
  9. Utilize local government organs to promote MDGs and LBS.
  10. Citizen groups and NGOs should promote MDGs and LBS to create pressure so that GOG sign on to Convention

#### **Demo Project Strategies:**

11. Conduct pilot projects to demonstrate solutions, this would make it easier to have the community to buy in – show results of local efforts; create an ownership of the project. Using existing statistics that show positive results.
12. Develop a master plan for Georgetown, e.g. a rapid assessment of hot spots which would then continue to build from here maybe a demo project
13. Develop a classification of Coastal Waters
14. Needs assessment of current Guyana situation.
15. Pursue bilateral cooperation in context of pilot project with training opportunities.
16. Develop water quality monitoring for Georgetown based on intensity of population.

#### **Legal/Institutional Strategies:**

17. Develop a proper land use plan for settlements in the Hinterland.
18. Enforce of the respective legislation
19. Revision of the Public Health Ordinance.
20. Improvement to the judicial system - make process faster by instituting Municipal / Environmental courts.
21. Review and revise the National Environmental Action Plan.
22. Develop a national policy/strategy for waste management (to cover sewage, sludge and its treatment).

## **Financing Strategies:**

- 23. Incentives should be created in producing solutions.
- 24. MDGs should be a target and NDCs reaching these targets should be given incentives e.g. money from Environmental Tax
- 25. LBS can be used to create national standards and targets for guidelines

## **Recommendations to be implemented in the short, medium and long term for both national agencies and international organizations such as PAHO and UNEP**

Short, medium and long term

### **1) Short term**

- a. Awareness programs
- b. Sharing of information, particularly technical designs e.g. size, design, building materials and alternative solutions
- c. Encourage people to build tanks and install flush toilets
- d. Share septic tanks
- e. Award concessions to waste management operators

### **2) Medium term**

- a. Encourage local solutions and promote entrepreneurship
- b. Research and develop solutions to treat, dispose, and market solutions
- c. Promote cultural change
- d. Promote toilets that conserve water
- e. Promote low cost designs
- f. Create sanitation/ environmental competition between villages, schools and NDCs
- g. Utilize environmental clubs for public awareness and dissemination of information

### **3) Long term**

- a. Improvement of relevant legislation to prevent overlapping of roles and responsibilities
- b. Monitoring and enforcement
- c. Develop a policy for access to environmental tax
- d. Encouragement of public and private sector partnerships
- e. Promoting technology that provides conservation and recycling of water

## **3. Role of UNEP and PAHO in assisting to have wastewater and sanitation management high on the political agenda – accession and implementation of relevant protocols and agreements.**

- 1) Create awareness among professionals
- 2) Have citizen groups and NGOs lobby for action in relation to sanitation, wastewater, and sewage
- 3) Assist in the provision of funds for research and studies.
- 4) Coordinate and creating pressure along with donor countries and institutions to add these issues as conditions to loans and grants.