

CEHInews

The Quarterly Newsletter of the Caribbean Environmental Health Institute

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*"The Environmental Health Development
Agenda for the Region must focus on bringing
improvement in the livelihood of the people in
general and the poor in particular through
Environmental Health interventions"*

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EHA training course workshop in St. Lucia

CEHI will host a Regional Training Course and Workshop on Environmental Health Impact Assessments from November 20 to 24, 2000 in St Lucia. It will provide training in EHA methodologies to officers from the Ministries of Health and Planning and other private and public sector institutions. The workshop will seek to develop a regional programme for Environmental Health Impact Assessments (EHA). This activity is congruent with the Caribbean Cooperation in Health, Phase II (CCHII), Sub-priority for Environmental Health which was adopted by Caribbean Ministers of Health in 1998 as the framework for action.

Environmental impact assessment (EIA) has been increasingly used as an aid to planning and decision-making throughout the Caribbean region. The health component of such assessments however remains weak and it has been recognized that the potential health effects of projects are rarely analysed. While the countries of the region are beginning to recognize the value in utilizing environmental health impact assessment (EHA) as a tool in planning for sustainable development, the limited capability in most countries (both to prepare and review/analyse EHAs) remains a serious constraint.

The Workshop will also help to integrate environmental health considerations into the mainstream of decision-making and planning mechanisms of Caribbean governments; and train a cadre of health and planning officers to the level necessary to perform basic EHAs.

Message from the executive director



Leadership in Environmental Health

Environmental Health (EH) improvement requires the involvement and collaboration of a number of sectors in countries of the Caribbean. These might include water authorities, solid waste authorities, hotels, tourism authorities, commercial establishments, politicians, health care workers, unions, mass media, education and training institutions, farmers and others.

If this is accepted, then how is the improvement and collaboration effected, at the national level? This was the focus of a meeting which took place in Barbados in March 2000.

In answer to the question of how this improvement and collaboration is to be effected, we at CEHI started with the following premise: The EH Unit, as the only national agency charged with responsibility for all aspects of environmental health management and improvement, should function as the coordinator of EH concerns across the country.

The End Result, we surmised, would be *“Strengthened EH Units, contributing to overall coordinated EH management in country and functioning to ensure overall EH improvement in the region”*.



Vincent Sweeney

But can we expect that EH Units as they currently exist, will be able to provide the kind of leadership to all other sectors for effective coordination and overall improvement? In order to answer, or at least seek to address this question, we might look at what that leadership will involve.

Firstly it must be strategic, in that it will be seeking to create a future for environmental health. This future will require change based on values and vision, unified by strategy, directed by purposeful action, and continually evolving. In the case of the traditional EH Unit, the often-used phrase *“paradigm shift”* is perhaps as appropriate here as it ever was.

These EH Units must be informed in order to decide on their future and determine the needs with respect to EH improvement. They must have strong leadership which will instill the kinds of values required by team members within these Units. They must have a vision and see the opportunities now being presented, or more correctly “forced upon” them. They will have to be motivated in order to act purposefully and they should also be prepared to facilitate or catalyse the “evolution” of their organisations, by their own examples.

This seems a tall order for any Unit, leader, or organisation. In many cases it may require sweeping out the old (ideas and/or people), as has been done in a few EH Units around the region, and bringing in fresh new ideas. In other cases it may require reorienting the units, backed by high level support within respective Ministries.

The process of review has pointed clearly to the need for this type of reorienting. It is encouraging to see attempts being made, through the Health Sector Reform process, and otherwise, to move EH Units, and by extension, EH Improvement forward. CEHI has supported EH Units in the past with strategic planning for EH improvement and anticipate that the future will see continued collaboration with Member Governments to improve the functioning of EH Units and position them as leaders in Environmental Health Improvement.

Poverty Reduction and Safe Water

By Joseph Narkevic, Country Coordinator
Water and Sanitation Programme, Bolivia.

To date, the primary interdisciplinary efforts in the "Water Supply and Sanitation Sector" have been with the "Health Sector", due more to the "doctors" than to the "engineers". I would like to make a case for consciously applying poverty reduction strategies or approaches as an integral part of water and sanitation efforts.

I suspect that any field worker among us (including myself on various occasions) has at some point stated, "the new water system is for domestic uses only." We have assisted in the formulation of laws and regulations that state as much. Yet, we have also heard time and again the requests from people (especially in rural areas) for water for their animals or for their crops, and we have responded, repeating "our mandate (or mantra)" for providing drinking water only. Oftentimes we react with indignation when system users find a way to circumvent our mandate, and actually use the water for what they really want.



Collecting safe water from a handpump

© Jim Holmes, WaterAid

There have been a number of small success stories of the productive uses of water and sanitation. I'll mention the case of a CARE-COSUDE pilot project in Nicaragua in which farm families purchased (without subsidy) locally-manufactured rope pumps for installation on their private wells, and then used the water not only for domestic purposes, but also to water their fields.

One elderly farmer actually hired two young men to pump irrigation water from his well, and to tend his large vegetable plot. His well became an income and employment producer.

Also, in Nicaragua, the outcry from people was so insistent, that watering troughs for their cattle were installed (they had already gone ahead and installed them anyway in some communities), where water was being extracted by deep-well electric pumping (the people were used to driving their cattle long distances and buying their water from vendors who operated private wells).

In Kenya, the Water and Sanitation Programme documents the Kabuku experience where "domestic water supply" translated into vegetable and poultry production. And we have only begun to scratch the surface regarding the productive uses of our own excreta, which is increasingly being viewed as a resource.

Even "urban agriculture" stands to benefit from an integrated, productive approach to water and sanitation. Constraints we face include our inability to listen to the users, the cobweb of laws and regulations we helped construct, PRSP processes that focus on "sectors", a lack of fora for cross-sector issues, and our own lack of vision.

My small suggestion in this overwhelmingly large and complex issue is to include "Poverty Impact Statements" in all water and sanitation projects and programmes, just as many now demand "Environmental Impact Statements." We must force ourselves to listen and look and become creative again.

*This contribution was part of an e-conference on People-Centred Approaches moderated by the Urban Services Unit Water, Engineering and Development Centre (WEDC) Loughborough University, Leicestershire, UK



Liquid Waste Public Awareness in Montserrat

A CEHI team, headed by Executive Director, Vincent Sweeney, including Sanitary Engineer, O'Reilly Lewis and Communications Consultant, Wesley Gibbings, visited Montserrat between September 4 and 6, 2000. The purpose of the visit was to meet with government officials, local engineers and to promote greater public awareness in the area of liquid waste management. On Monday September 4, the Institute was represented at a live phone-in programme hosted by Radio Montserrat. Other panelists included local officials Trevor Howe and Major Joseph Lynch.

On Tuesday a meeting was held with a wide cross-section of personnel involved in the health and environment sector and the Executive Director and Sanitary Engineer later toured the facilities at Look Out and the proposed site for the installation of a new wastewater treatment facility in the same area. Discussions were also held with Minister of Agriculture and the Environment, Mr. Brunel Meade.

CEHI's Executive Director, Mr. Lewis and Mr. Howe led discussions with residents of the Lookout community and entertained a wide range of questions about liquid waste management generally and the new facility in the area in particular. Residents expressed their satisfaction with the visit and some offered to provide the necessary follow-up among those who had not attended the discussions.



Vincent Sweeney and O'Reilly Lewis on tour of Lookout with Montserrat team

CEHI looks at Income Generation

CEHI has reported progress in its attempts to broaden the financial base of the Institute.

The Executive Director reported on such developments at a meeting of the Board of Directors of the Institute in Washington D.C. on September 24, 2000. In his report on the work of CEHI over the past year, it was noted that the Institute was able to augment its revenue streams through the sale of services - particularly laboratory services - to the private sector.

In 1999, CEHI strengthened its laboratory capabilities through the purchase of a High Performance Liquid Chromatograph (HPLC). This greatly improved its capacity to analyse a wide range of pesticides. During the year, the Institute has also been able to generate additional revenue from laboratory work - most of which was generated from the regional hotel sector.

Additionally, partnerships have been forged with other agencies and companies in order to collectively offer services in specialised areas, such as biomedical waste and environmental health impact assessments. "We are optimistic that these partnerships will generate further revenue for the Institute's work," Mr. Sweeney said in his report to the Board. The meeting also focused on strategies for improving environmental health conditions in the Caribbean and strengthening the regional support for CEHI.

Reference was made regarding the regional and country-specific interventions made by the Institute in pursuit of environmental health improvement. These included environmental health needs assessments in Trinidad, Jamaica and Barbados; consultations in Jamaica toward the strengthening of the Environmental Health Unit; the preparation of an Environmental Health Act in Antigua and Barbuda and an assessment of the impact of hydrocarbon pollution in the British Virgin Islands.

The meeting of the CEHI Board included Ministers of Health from Antigua & Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts & Nevis, St. Lucia, St. Vincent & the Grenadines, and Trinidad & Tobago. It also included Sir George Alleyne, Director of the Pan American Health Organisation (PAHO), and representatives from the Caribbean Community Secretariat.



Environmental Health Management: Building Consensus

In the last twenty years, the protection and promotion of health in the Caribbean have become more urgent, as a result of changes in the physical and social environments of the countries, and the increasing recognition that, without a healthy population, sound and sustainable development is not possible.



Herold Gopaul
Information Services Director

A healthy Caribbean population is an integral factor in the development process of the region, and this cannot be achieved without focusing on the environment. For the Caribbean and other Small Islands Developing States (SIDS), development, health and the environment are intimately interwoven.

The Environmental Health (EH) Development Agenda for the Region must focus on bringing improvements in the livelihood of the people in general and the poor in particular - that are consistent with their own aspirations - through environmental health interventions. The successful execution of national and regional environmental health development agendas is primarily dependent on the collection, generation, packaging, dissemination and use of high quality information in various formats, including the use of different media. This information is absolutely essential for facilitating environmental health planning and development. However, it should be noted that information is not an end in itself, but rather a means to an end. It is usually needed for three main reasons:

- Effective planning and management
- Monitoring the efficiency of plans
- Evaluating the effectiveness of plans

The CARICOM region, like most small-island developing states, has limited resources to devote to the production and acquisition of all scientific, technological, economical and industrial information relevant to environmental health. However, the Region's environmental health development agenda must, out of necessity depend to a great extent on the generation of new knowledge and the application of existing knowledge and information. This knowledge and information, where they exist, must be made accessible to policy and decision-makers and environmental health managers. There also exists in the Region, as elsewhere, a gap in information accessibility and transfer which must be bridged if the Region's environmental health development agenda is to progress at a more rapid rate.

Data, Information, Intelligence, Knowledge and Environmental Health Management

The role of information, intelligence and knowledge in environmental health management is to help public and/or private decision makers to make decisions to solve problems that arise at the community, local, national and regional levels.

This requires the identification of problems, the diagnosis of causes, the identification of potential solutions, decision for action, and monitoring and evaluation of the action and outcomes. Each of these components requires information, intelligence, knowledge and analysis.

In the process of EH Management the distinction between data, information, intelligence and knowledge should be made.

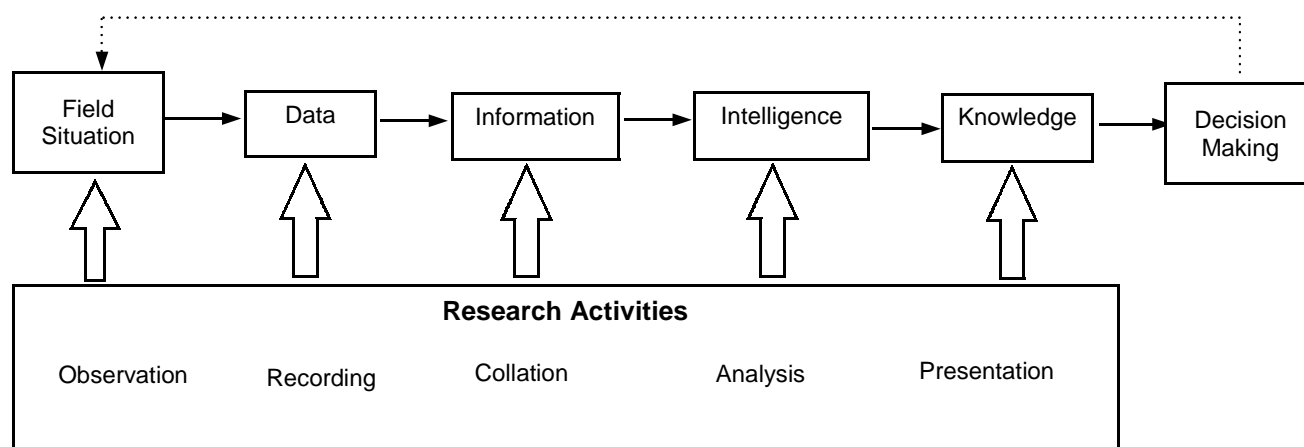


Figure 1: Research, Information, Intelligence, Knowledge and Decision-making in Environmental Health Management

EH data refer to raw (unanalyzed) facts and figures, collected for an information system through field work and research.

EH information refers to analyzed data and the meaning that one ascribes to it, often presented in a form that is specifically designed for a given decision making task, and transmitted to/received by the decision makers.

Environmental Health Intelligence is both the process and output of enhancing the capacity for understanding environmental health issues. It is the ability to perceive and comprehend environmental health information that has been gathered using various mechanisms, including research, leading to better informed decisions and therefore allocate resources more efficiently to achieve goals. It adds value to EH information.

EH knowledge refers to the subsequent absorption, assimilation, understanding and appreciation of EH information and intelligence. It is used to explain, understand and predict.

As acknowledged internationally, Environmental Health management requires a multi-sectoral, multi-disciplinary approach firmly based on up-to-date and timely information and intelligence. EH information and intelligence needs range from scientific knowledge over spatial-temporal, social, economic, legal, policy and meta information. The specific needs for EH information and intelligence in the Caribbean are not well defined and are still evolving. While there have been some initiatives in developing subject-specific information and intelligence systems for EH in the Caribbean, from a cursory examination, it appears that they have not addressed the higher level needs of end users in terms of an EH intelligence to guide policy, programme development, public awareness and sensitization and remedial action.

To assist in EH planning, development and management at the regional, national, local and community levels, a regional/national/local/community EH information and intelligence infrastructure needs to be established. This is a very onerous task given the constraints of limited financial, human and technical resources within the Region. However, it is a task that the Region must urgently embark upon.

- **6th Annual Virgin Islands Nonpoint Source of Pollution Conference: "From Summits to Sea: New Projects & Programs for a New Millennium"**. December 6 - 7, 2000. St.Croix, U.S. Virgin Islands. Sessions include: •Nonpoint Sources Education & Outreach•New Government Initiatives•Nonpoint Source Case Studies/ Research•Watershed Approaches•Field Trip/Outdoor Classroom•Youth Poster, Poetry & Photo Contest.
Contact: V.I.Resource Conservation and Development Council, Inc. 5030 Anchor Way, Suite #2, Gallows Bay, Christiansted, VI 00820-4692; Website: <http://rps.uvi.edu/CES/VINPconf.2000.htm>
- **Call for Papers. IV Inter-American Dialogue on Water Management: "In search of Solutions"**. April 22 - 26, 2001, Foz de Iguacu, Parana, Brazil. Thematic areas: transboundary river basins; climatic vulnerability; management of water in the cities; water resources management in arid and semi-arid regions. Deadlines for submission of papers November 30, 2000.
Contact: Executive Secretariat, Av. Brigadeiro Luiz Antonio, 317-conj.53, 011317-901-Sao Paula-SP, Brazil. Tel/Fax: 55 11 3104-6412; Email: dialogo@aquacon.com.br
- **ECOSUD 2001: 3rd International conference in the series on Ecosystems and Sustainable Development**. 6 - 8 June 2001 in Alicante, Spain. The meeting will provide a forum for the presentation and discussion of recent work on the engineering and modeling aspects of ecosystems and sustainable development. Some conference topics include: Application of ecological modeling in environmental management; Biodiversity; Climate modeling & ecosystems; Integrated modeling; Environmental risk; Sustainable development issues; Forestation issues; Computational modeling of natural and human ecosystems; water resources issues and energy generation.
Contact: <http://www.wessex.ac.uk/conferences/2001/ecosud01/>
- **2nd International Conference on Interactions Between Sewers, Treatment Plants and Receiving Waters in Urban Areas (INTERURBA II)**. Feb. 5-8, 2001. Lisbon, Portugal. The objective of the conference is to bring together scientists and practising engineers in the area of environmental management and control, to express their views and discuss physical, chemical and biological processes and interactions including sewers, treatment plants and receiving waters.
Contact: Tel: +351 1 841 8365; Fax: +351 1 849 7650; E-mail: gaby@civil.ist.utl.pt
- **3rd NSF International Symposium and Technology Expo on Small Drinking Water and Wastewater Systems Treatment, Management and Finance**. Apr. 22-25, 2001, Washington, DC, USA.
Providing safe drinking water and effective wastewater systems management are key elements that assure safe and healthful environments linked to social and economic development. Managers and operators of small water and wastewater systems encounter special challenges providing safe drinking water and treated wastewater in complex financial, technical and regulatory environments.
Contact: Joseph A Cotruvo, Tel: +1 734 827 6865; Fax: +1 734 827 6831
E-mail: cotruvo@nsf.org; Web: <http://www.nsf.org/conference/water2001/>

On October 1 and 2, 2000, the Caribbean Environmental Health Institute hosted a workshop in Trinidad entitled *Solid Waste Management in the Caribbean - A Regional Approach to Solving Problems*.

Among matters discussed were country reports from the solid waste managers in attendance. CEHInews brings highlights of some of the reports presented:



A Solid Waste Management Authority for Jamaica



The Government of Jamaica is to establish a National Solid Waste Management Authority (NSWMA) by April 2001. The Authority will be responsible for the management of solid waste across the entire country.

All Parks and Markets companies (these are companies that are responsible for waste management at the district level), will be phased-out and the NSWMA will take over the management of the system in phases beginning with the privatization of the collection in the Riverton City Waste Shed, then expanding into the other waste sheds.

The responsibilities of NSWMA will be to:

1. Prepare development plans for the solid waste sector.
2. Arrange, manage and regulate solid waste collection, transport and disposal.
3. Promote and facilitate resource recovery, including private sector involvement in the solid waste sector.
4. Carry out community education and outreach programmes.
5. Advise on solid waste policy.

The establishment of the NSWMA will not be an instantaneous event but will be a process through which the system evolves into its new form.



Jamaica's bountiful water resources



The striking contrast of hills and valleys



Dominica: Aiming for Island-wide Coverage



The National Solid Waste Management System in Dominica is operated by the Dominica Solid Waste Management Corporation, a statutory entity established by the Solid Waste Management Corporation Act, 17 of 1996.



The Nature Island

Under the Act, the Corporation is charged with the responsibility of providing facilities for the collection, transport, treatment and disposal of solid waste and matters incidental thereto. The Corporation is also the executing agency for the National Component of the OECS Solid and Ship-Generated Waste Management Project. The Dominica Solid Waste Management Corporation currently provides waste collection and transport services to the entire western coast of the island. Seventy-five percent (75%) of the population is concentrated in this area. It is the Corporation's intention to provide services islandwide when this capacity is achieved through the successful completion of the OECS Waste Management Project. The Corporation also operates the two existing landfills on the island, namely the Stockfarm Landfill located in the South received approximately 75% while the Portsmouth Landfill received 25%. The skip system continues to be the main facility for the collection and transportation of general waste.

The Corporation is the principal provider of waste collection and disposal services with the exception of a few private and small contractors providing transport services to hotels and construction companies.

The current sources of income of the Corporation comprises government subvention, receipts of the visitor environment levy and receipts from the reception of ship-generated waste. No fees are presently levied for the haulage and tipping of residential or Industrial, Commercial and Institutional (ICI) wastes. This cost recovery mechanism will be implemented when the new sanitary landfill funded under the OECS Solid and Ship-Generated Waste Management Project is commissioned. It is also anticipated that partial privatization of the National Waste Collection and Transport System will be implemented when the OECS Solid Waste Management Project is completed.

The following principal national components of the OECS Waste Management Project, namely, procurement of equipment for the reception of ship-generated waste, waste treatment and disposal, waste collection and transport and public awareness/education are under implementation. The Corporation continues to view education and public sensitization as a key responsibility and is developing among other activities, a school environmental programme focusing on proper waste management practices, including composting.



St. Kitts and Nevis: Meeting the Solid Waste Challenges



Solid Waste Management in St Kitts and Nevis falls under the portfolio of the Ministry of Health and Environment and is the responsibility of the Environmental Health Department.

Storage of refuse is the responsibility of each citizen of St. Kitts. Presently refuse is stored in various types of containers mostly 55 gallon drums, which is placed at the gateway for collection by the Environmental Health collection team.

There are specified days for the collection of refuse in the various communities. Collection ranges from twice weekly to daily. The Environmental Health Department continues to play a vital role in the day to day operations of the collection service.

St. Kitts is divided into nine districts for solid waste collection and a fleet of six trucks complements the nine districts. Some vehicles work a shift system to alleviate the shortage of trucks. During extended periods of mechanical repairs, private contractors are utilized to assist in the collection service. The Public Works Department is the Government Agency responsible for maintenance and repairs of the refuse collection vehicles.

In recent years the environment in many OECS Countries including St Kitts has come under increasing threat from the indiscriminate dumping of solid waste both by ships at sea and by individuals on land.

As a result, St. Kitts like other OECS Countries, has embarked upon a Solid Waste Management Project to upgrade domestic waste management systems and facilities. This includes improving the collection; treatment and disposal of ship and shore generated solid waste.

The present staff of the St. Kitts Solid Waste Management Corporation comprises a General Manager, Operations Manager, Financial Officer, Executive Secretary, a Landfill Site Supervisor and five Landfill Site Operators/Litter Wardens.



Brimstone Hill

On September 1, 2000 the St. Kitts Solid Waste Management Corporation (SWMC) assumed full responsibility for the management and control of the Conaree Landfill Site which is the only official dumping site currently being used in St. Kitts. It is located on the eastern side of the island between the end of the Airport runway and the Conaree Beach.

Have your say!

Please feel free to submit articles relevant to Environmental Health issues in the Region, for consideration for publication in *CEHInews*.

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To receive *CEHInews*

please fax, post or email your name and postal address to:

The Editor, *CEHInews*
P.O. Box 1111
Castries, ST. LUCIA
Tel: 1(758)452-2501/1412
Fax: 1(758)453-2721
Email: cehi@candw.lc
Web site: <http://www.cehi.org.lc>

