Final Report

Legislative Policy Brief
On
Food Safety, Water Quality and Environmental Health

In the

BRITISH VIRGIN ISLANDS

for

Pan American Health Organisation (PAHO)

Prepared by:
Judy Daniel Julien
E-mail: judyjul1@aol.com

April, 2000
# TABLE OF CONTENTS

BACKGROUND, OBJECTIVE AND SCOPE ......................................................................................................................... 2

TERMS OF REFERENCE AND METHODOLOGY ............................................................................................................ 3

COUNTRY REPORT
   BRITISH VIRGIN ISLANDS ........................................................................................................................................ 6

STAKEHOLDER WORKSHOP ........................................................................................................................................... 11

APPENDIX I
   SUMMARY OF REGIONAL CONCLUSIONS ................................................................................................................... 15

APPENDIX II
   LIST OF PERSONS/ORGANISATIONS CONSULTED .................................................................................................. 19

APPENDIX III
   LEGISLATIVE POLICY BRIEF ...................................................................................................................................... 20

   APPENDIX IV
      LIST OF ACRONYMS ................................................................................................................................................. 25

APPENDIX V
   SELECTED BIBLIOGRAPHY ....................................................................................................................................... 26
A. Background, Objectives, Scope

Summary

This section describes the background to the project, identifies its objectives and explains its scope.

Background

Public health legislation in the Caribbean has become outdated and irrelevant in many ways to the needs of a modern developing society. The results of environmental studies in the Caribbean community indicate that their legislative framework for environmental health has received little attention in recent times. Except for the Litter Act, which was enacted in these countries around the early 1980’s, the most comprehensive environmental health legislation dates back to their Public Health Act that is itself in need of general revision.

This weak legislative framework for environmental health has severely constrained the activities of Public Health/Environmental Health Departments in the discharge of their responsibilities. As such, the ability of countries to tackle pollution and environmental health problems is greatly restrained by a lack of resources, as pollution control and health protection measures have often not kept pace with economic development.

The regulatory framework is equally weak and does not include provisions for standard-setting, monitoring and the establishment of modern criteria that promote food safety and water quality.

The relatively new approach to the prevention and control of food-borne diseases is the hazard analysis critical control point (HACCAP) system. This system seeks to identify hazards associated with any stage of food production, processing or preparation, assess the related risks and determine the operations where control procedures will be effective. The system places emphasis on assessing hazards and risks and identifying critical control points, rather than on control criteria and monitoring procedures. The implementation of HACCAP hazard measures is therefore placed on educating people who prepare and store foods.

The threats to human health associated with poor drinking-water quality were critically assessed by WHO in its Guidelines for Drinking Water Quality, 1985. Of particular concern and addressed in the report, is the fact that there is increasing evidence that
drinking water sources are being contaminated and that a natural resource, vital to health and development is being threatened.


At the 1992 UNCED, States were requested to develop national sustainable development plans; and the World Health Organisation (WHO) and by extension PAHO proposed to assist countries with the health and environment component of such plans. Chapter 6 of Agenda 21 states that health and development are intimately connected and has identified activities aimed at “reducing health risks from environmental pollution and hazards” as a priority programme area to be co-ordinated by the WHO or achieving the goal of sustainable development.

Furthermore the recent analysis of WHO has clearly established the interdependence among the factors of health, environment and development and has revealed that most countries are lacking such integration as would lead to an effective environmental health programme.

**Objectives and Scope**

The Pan American Health Organisation has commissioned the present study. Its main objective is to review the legal framework for food safety and water quality in selected Caribbean countries and to identify the areas that require improvements in this framework. The central objective of this study will provide the British Virgin Islands (BVI) with the opportunity to advance their efforts to modernise their legislative instruments for the practices of environmental health in the area of food safety and water quality/wastewater management.

**B. Terms of Reference and Methodology**

**Summary:**

*This section of the Report describes the terms of reference, which guided the study, and the methodology that was implemented in its conduct.*

**Terms of Reference**

In accordance with Contractual Services Agreement, the Consultant was required to carry out the specific activities as follows -

(a) Develop strategy and workplan for reviewing environmental health legislation or components of same in each of the countries.
(b) Visit Barbados and hold a meeting with Environmental Health Technical Officers and the Programme Officer Eastern Caribbean (POEC) to discuss plans and compile relevant background documents at CPC.

(c) In consultation with Technical Officers of PAHO, draw up an action plan that would contain a schedule of the visits and activities to be carried out in the project countries.

(d) Obtain consensus from the nationals on the scope of change or adaptation to other models through facilitating technical consultations, workshops or other gatherings as judged appropriate.

(e) Prepare legislative brief outlining specific aspects of the legal framework in the Environmental Health Components as indicated below:

- Anguilla and BVI - Food legislation and water quality
- Dominica - Food Safety and water quality
- Grenada - Environmental Health legislation, food safety and water quality
- St Kitts and Nevis - Food safety and water quality

(f) Provide PAHO CPC officials with mid-term and final reports indicating status of activities, achievement and constraints.

Methodology

The methodology employed took into account a multi-sectoral approach involving consultations with the public sector and private where possible and the promotion of inter-agency collaboration. Agencies that were constituted in the preparation of this report included Ministries of Health, Environment, Bureau of Standards and Water Authorities. This consultancy sought to highlight inter alia, the collaboration possibilities that already did or could exist between and among sectors and institutions with regard to the environmental health framework.

The selected CARICOM - CEHI countries were Anguilla, British Virgin Islands, Dominica, Grenada and St. Kitts. Generally the institutions and national co-ordinator were identified by PAHO. The Consultant also extended the consultations to other agencies as were considered useful to the study. A Summary of Regional Conclusions is at Appendix I.

---

1 On request from the Environmental Health Officials in Dominica requested that the scope of the Legal Consultant’s work was extended to also include water quality. CAP. 194 No. 10 of 1976
2 On request from the Environmental Health Officials in Grenada requested that the scope of the Legal Consultant’s work was extended to also include water quality.
3 On request from the Environmental Health Officials in St. Kitts and Nevis the scope of the Legal Consultant’s work was extended to also include water quality.
In accordance with the Terms of Reference, fact-finding missions were conducted to the BVI to develop a plan of action for the implementation and enforcement of a revised legal framework for food safety and water quality/waste water management within the context of environmental health. A list of persons/organizations that were consulted is at Appendix II. The existing institutional capacity, technical capability and institutional strengthening needs of the selected countries with regard to implementing and enforcing the standard were also considered. The visits were coordinated by PAHO and national counterpart Dr. Irad Potter.

A draft report was submitted as the basic working document for a Stakeholder Workshop, which was held in the BVI on 29th February, 2000. The results of the Workshop forms part of this final report, outlines the agreed national priorities for legislative review and incorporates a legislative policy brief that may be presented by executives to the Cabinet for agreement on the preparation of national legislation in the areas of water quality, food safety and environmental health. The legislative policy brief is at Appendix III.

The Consultant extends her appreciation to the national counterpart for his support in organising the visits to the BVI and for the hospitality of all persons that were interviewed. These visits were successfully conducted and served the objective of heightening and promoting awareness of the need for improvements in the legislative framework for environmental health generally and specifically for food safety and water quality.
C. Country Report

British Virgin Islands

General

The territory of the British Virgin Islands (BVI) is an archipelago that is comprised of approximately sixty islands, rocks and cays. It is located in the northern Caribbean Sea, and the territory has a total area of 153 sq. km (59 sq. miles). There are four main islands on which the majority of the population resides - Tortola/Beef Island, Anegada, Virgin Gorda and Jost Van Dyke. The territorial sea of the BVI covers an area of 1489 sq. km. (575 sq. miles) and extends 5.6 km. From the low water line along the coast. Together the land and sea areas comprise 1,642 sq. km. (634 sq. miles).

In the BVI, responsibility for environmental health and public health functions vests in the Ministry of Health, Education and Welfare. The relevant Departments are the Solid Waste and Public Health Departments. Like other countries, under study, the controlling legislation is the outdated Public Health Ordinance of 1967, which authorises the Minister responsible for health the duty to establish boards and committees to assist in the discharge of his statutory responsibilities. The Minister is authorised to establish regulations for the prevention, removal and abatement of nuisances, the construction and maintenance of sewers and sewerage work, the collection and disposal of rubbish, night soil and other offensive matter and the prevention of environmental pollution. Enforcement powers include a right of entry to monitor compliance with the provisions of the Ordinance or regulations made thereunder and fines for offences against its provisions.

Pursuant to this Act, the Public Health (Nuisance) Regulations, 1977 have been made. The Litter Abatement Ordinance, 1987, which prohibits the deposit of litter in public places except in receptacles, also requires the Minister to enact regulations to give effect to its provisions. It is not clear whether any such regulations have been made.

Given the importance of tourism to the economy of the BVI, improvements in environmental quality and in this instance to the related areas of food safety and water quality/waste water management, will find rewards in an improved tourist product.

Food safety

Tourism still provides the impetus for environmental health activity in the BVI more so in relation to food safety. The BVI is largely dependent on imported food, requiring the minimal input of environmental health inspectors as regards food prepared for human consumption in large and small bars and restaurants. These inspections are conducted annually and within two weeks of the receipt of a compliant. The main focus of inspections is upon food handling by workers. There are no inspections of seasonal vending stalls.
The Public Health (Food Hygiene) Regulations, 1972 made under sections 47 and 105(2) of the Public Health Ordinance, 1969 was enacted to regulate the conduct of food business operations. Part III of the Regulations prescribe the requirements relating to persons engaged in handling food. Food handlers are required to obtain certificates of good health annually. Persons suffering from fever, vomiting, diarrhea or any infection likely to be injurious to health shall cease work. Part IV stipulates the requirements relating to food premises including having an adequate supply of water to be maintained on the premises, the provision of wash basins, first aid equipment and the keeping of suitable and efficient lighting and ventilation. Requirements for stalls are also prescribed in the Regulations with specific requirements for every stall from which meat and fish are sold.

Public health inspectors are given wide powers of enforcement in relation to inspection, examination and condemnation of food. In accordance with section 27, a public health officer may, at all reasonable times, enter any food premises and inspect and examine any food sold, exposed for sale, deposited in any place or in the course of transmission for the purpose of preparation or manufacture for sale. The Chief Medical Officer may condemn, seize or take away any food, which appears to be diseased or unwholesome for human consumption. These provisions mainly focus upon hygienic practices and do not comprehensively provide the measure of protection that the handling of food at any stage of the process would demand.

As a general rule, quality of food issues relate to its origin in the BVI as most food is imported. BVI environmental health authorities therefore should be vested with the power to examine documents pertaining to origin and other particulars of imported food. Port health should also be included in the process. The Draft Public Health (Inspection of Food and Drugs) Regulations 1988 proposed under section 10 of the Public Health Ordinance, 1976 seeks to address this. It applies to any food or drug imported into the Virgin Islands and to any ingredient to be used in the manufacture or preparation of any food or drug. It empowers an inspector, inter alia, to -

(a) open and examine any receptacle or package that may contain any food or drug to which the regulations apply;

(b) examine any books, documents or other records…;

(c) seize and detain any food or drug or even destroy such food.

The draft is still to be finalised.

The regulatory regime should establish food standards for food composition and quality, prescribe sound practices in production, processing, transportation, storage, distribution, preparation and sale of food, prescribe safe conditions for the use of food additives, packaging components and pesticides, labelling requirements, establish procedures for inspection, monitoring, food analysis and administration.

4 No 15 of 1969
Provisions for the hazard analysis critical control point (HACCAP) system does not form part of the regulatory regime for food safety. Like the other project countries, environmental health officials are of the view that the incorporation of all aspects of the system will prove costly and to a large part un-implementable as sectoral budgets and regulations do not provide for educational programmes - the focus of HACCAP. Generally, reliance is placed on the CODEX Alimentarius system because of its simplicity and compatibility with the existing legislative and budgetary framework.

Drinking Water Quality

In the BVI, management of the water supply is entrusted to the Water and Sewerage Department. About 70% of water demand is supplied by the Department and 30% of the water is from private cisterns. Since 1990, desalinated water has become the main source of the public supply. The BVI produces about 26,527,083 gallons of potable water per month through desalination. At the end of 1994, 4807 households were connected to the public water system with 80.5% of the population served. The majority still depend on cisterns, still mandated by law for drinking water. Water quality control measures practiced by the Water and Sewerage Department and the Public Health Department meet the low end of the WHO Drinking Water Quality Standards. It is monitored for total dissolved solids, ph, residual chloride, E-coli and conductivity by the Water and Sewerage Department. The Public Health Department also conducts spot checks.

The provisions of the Water Supply Ordinance of 1956 place restrictions on the private water supply that require any person who collects or distributes a supply of water for public or private use without having first obtained the approval of the Executive Council. Superintendents are also vested with certain powers, the objective of which is to prevent the water supply from contamination. Among the several powers of the Executive Council is the power to make regulations for the use and prevention of the misuse or waste of a supply of water and for the conditions under which water may be supplied, and equipment installed for private purposes. The scope of this Ordinance should however be widened to include provisions to protect ground water aquifers from contamination and for monitoring and regulating potable water and sewerage treatment services. The Ordinance does not contain provisions to control cisterns, still mandated by law for drinking water nor does it address water quality.

Water obtained from other means such as ground water is exposed to contamination by septic tanks and other pollutants. Pollution by agro-chemicals particularly in areas susceptible to slope wash is prevalent in the BVI. Salt water intrusion into aquifers and the discharge of brine water into the marine environment by several desalination plants.

Draft Public Health (Water) Regulations made under section 10 of the Public Health Ordinance of 1976 have been prepared since 1988 but have not been enacted. The draft regulations contain useful provisions for the prevention of pollution to public and private water supplies, both surface and underground water and makes it an offence to -
(a) commit any act which may impair the quality of water in any river, stream, spring, well, pond, reservoir or any other place;

(b) discharge any sewage, industrial or trade waste, filth or any other matter into any well, hole or other opening in the ground so as to impair the quality of any underground water;

(c) discharge into a water supply sewage, industrial or trade waste or any other matter that is likely to be injurious to health, except where a person has a permit to make such a discharge …;

(d) swim, bathe, wash clothes or other materials, wash animals, cleanse utensils or vehicles in any river, stream, spring, well or other water contributing to a public or private water supply;

(e) erect any building, septic tank, absorption pit or other sanitary convenience or conduct any industrial or other activity likely to cause contamination in any area that is declared a water catchment area or within 200 feet of any private or public water supply;

(f) sell or, offer for sale, or convey water for domestic use in tanks or other receptacles except with the written permission of the Director of Health Services⁵.

A Draft Ground Water Monitoring and Control Bill, 1973 which contains provisions that promote improvements in water quality has also been drafted for some time. Its contains provisions for the establishment of a Water Board whose duties shall be to regulate and control the apportionment of ground water resources, issue licenses for the abstraction of ground water and the keeping of a register of licences. There are no present efforts to finalise it.

With regard to drinking water quality standards the draft Water Regulations vests the Ministry of Health with jurisdiction to determine the “standards of purity” for drinking or domestic purposes, food processing or manufacturing. The duty of maintaining such standard is that of the owner or occupier of the supply system. Monitoring and sampling requirements are to be prescribed by the Director of Health services and records are also required to be kept. Similar provisions are included in the draft for chlorinated water.

Wastewater Management

The Water and Sewerage Department of the Ministry of Communications and Works is responsible for the production of water and for sewerage disposal. Approximately 92% of homes and other buildings use septic tanks, which are largely inadequate in construction and maintenance. There are also serious problems with soak-away pits

⁵ This provision (draft) appears to be applicable also to the sale of bottled water, which would otherwise be unregulated. This provision will require the permission of the Director of Health Services to be obtained for its sale.
particularly in the case of large apartment buildings. There is an increasing inability of sewage facilities to meet the increasing demands for sewage disposal by the local population and the yachting industry with No provisions are made for the extension of wastewater disposal systems to accommodate expansion of buildings.

These problems result in discharges of sewage into the marine environment, seepage from home septic tanks and offensive odours from sewage collection systems in urban and industrial areas.

The Public Health Ordinance, No. 10 of 1976 is the principal statute concerning waste management. It authorises the Minister of Health to make regulations to prevent, abate or remove nuisances and unsanitary conditions on premises and to regulate against environmental pollution. The existing legislative framework does not include provisions for the control of land and sea pollution problems caused by the indiscriminate disposal of used motor oil, sewage effluent from septic tanks, garbage and old car batteries. Due to the absence of standards, legislation, laboratory resources and field equipment, monitoring of discharges is minimal and does not allow for adequate control over the many health and environmental exposures that currently exist such as discharges form sewage. Many industries in the BVI discharge processed wastes directly into the watercourses without due regard to their impacts on human health. Industrial zoning is not practiced. There are few constraints placed upon manufacturing processes and the conduct of environmental audits by this sector is not required.

In summary, it is quite apparent that more in-depth attention needs to be paid to areas of importance such as waste and excreta management, monitoring and disposal regulation, water quality inspection and better equipment for testing, increased inspections related to food and food hygiene, control of pollution from other contaminants such as motor oil and effluent from septic tanks.

The Conservation and Fisheries Department of the Ministry of Natural Resources and Labour have conducted water quality testing of the marine waters of the BVI during the period 1986 - 1997 through a series of studies. The report of these studies concluded that based on the data that was collected, the marine waters of the BVI can be considered to be generally healthy. It recommended that water quality monitoring should be continued, bacterial parameters analysed and water quality standards implemented. The adoption of water quality standards applicable to the waters within the BVI were also proposed.

---

6 “It is possible that a more thorough monitoring programme with a stronger emphasis on quality control would highlight a different situation”. Conservation and Fisheries Department 1998 Report on the Laboratory and the Water Quality Monitoring Programme, pp. 2.
Stakeholder Workshop, 29 February 2000

The Pan American Health Organisation together with the Government of the BVI hosted a Stakeholder Workshop on 28 February 2000. The workshop presented an excellent opportunity to explore the wide range of issues pertaining to environmental health generally, food safety and water quality in the BVI. The participants at the Workshop made the legislative policy recommendations in the following areas:

**A. Public Health Ordinance, 1967**

Not unlike other Caribbean territories the main legislative vehicle on environmental health in the BVI is seriously outdated and inadequate to address the needs of a modern-day society. The Public Health Ordinance, 1967 does not adequately address or correct environmental health problems such as the disposal of liquid and solid waste, the discharge of untreated sewage, waste reduction, collection, storage, transport, recycling or any of the present-day concepts regarding waste management, air, noise or marine pollution. As such, the scope of this legislative instrument revolves around the maintenance of general sanitary conditions and cleanliness.

The Act is deficient in implementation machinery as provisions for sampling; monitoring and compliance procedures are weak. With regard to enforcement, the Public Health Act, 1969 relies upon nuisance theory, which places severe limitations on the effectiveness of enforcement. It was recommended that a revised Public Health Act should introduce modern day compliance and enforcement techniques such as standard setting. It should establish the power of the Environment Health Department to conduct baseline research as well as provisions for the institution of class action suits. This latter mechanisms has been found to be very useful especially where enforcement capability is low; similarly with regard to the use of incentives to encourage environment-friendly practices.

The existing weaknesses of the Public Health Ordinance, 1967 constrains any advances that may be made in the environmental health sector of the BVI and should be amended accordingly.

**B. Food Safety**

(i) inspection requirements for food establishments should be formally established in legislation and should include food storage conditions, physical infrastructure, workers and food handling practices;

(ii) in collaboration with the Town & Country Department, regulations should be prescribed for the physical integrity of buildings housing food and for the involvement of Public Health Department in the development approvals process for food establishments;

(iii) the Trade Department should be required to collaborate with the Public Health Department in the issuance and renewals of permits to seasonal vendors.
Existing food handler’s clinics are inadequate and need to be improved to include training activities for all vendors before licences are issued. The regulations should make it mandatory that vendors attend training activities;

(iv) standards should be prescribed for stall infrastructure, utensils and clothing and guidelines for seasonal vendors should also be prepared;

(v) the Public Health Department should be vested with the power to:

(a) revoke, suspend and modify licences;

(b) designate “environmentally safe surroundings” for the sale of food;

(c) establish conditions in the license.

(vi) the power to enter and inspect commercial home preparation sites and sites for event food preparation such as bazaars etc. should be prescribed;

(vii) the definition of “food handler” should be amended to mean “any person engaged in any activity in a food establishment”;

(viii) the power to condemn food should be vested in the Public Health Officer, with appeals to the Chief Public Health Officer and court;

(ix) regulations establishing procedures for the closure of food establishments, seizure, sampling should be prescribed;

(x) Public Health Department should work along with the Veterinary Department and be involved in port health inspections;

(xi) guidelines for transportation, storage, packaging for the importation of food should be adopted;

(xii) training of public health officers in sampling, prosecution, laboratory analysis;

(xiii) collaborative mechanisms between the Departments of Agriculture, Customs & Excise and Health should be prescribed.

C. Water Quality

(a) collaboration between the Public Health Department and the Town & Country Department with regard to development approvals should be mandated in regulations;
(b) drinking water quality standards, taking into account the *WHO Drinking Water Quality Guidelines* and new technologies;

c) the role, functions and actions of the agencies relevant to maintaining drinking water quality should be clarified;

d) penalties for breach of regulations should be revised upwardly;

e) a Bureau of Standards should be established;

f) water bottling handlers should be required to be certified by the Public Health Department;

(g) all applications in respect of sewage facilities should be reviewed by the Health Department before planning approval is granted;

(h) a certificate of approval for waste disposal systems should be required for all buildings before occupation is permitted;

(i) a zoning plan defining the responsibilities between government, private sector and civil society and the associated regulations should be prescribed for the BVI;

(j) standards for the discharge of effluent should be established with appropriate penalties for breach attached; the polluter pays principle should apply in assessing those penalties;

(k) standards for bathing, recreational and public water courses water quality should be at the highest standard in accordance with WHO recreational water quality guidelines;

(l) the monitoring of domestic, industrial, commercial and recreational waste water discharges should be regulated;

(m) a national laboratory to carry out laboratory services for water quality, food analyses, pesticides and toxic chemicals and soil analysis should be established.

**Conclusion**

Immediate serious attention should be given to the modernisation of the existing *Public Health Ordinance* and the regulations made thereunder. Environmental health legislation relates closely to the water sector, particularly regulations for water supply, groundwater extraction and authority to oversee and monitor sewerage facilities.
Much work has been done with regard to the preparation of draft regulations both in the area of food safety and water quality but is yet to be enacted. The scope of the draft provisions are indeed visionary in that they include considerations for all aspects of water pollution, however they do not introduce requirements that rely on standards rather than the subjective opinion of the Ministry of Health officials in determining water quality, thus their weakness. These useful drafts should therefore be reviewed and subsequently finalised. These include -

- **Public Health (Inspection of Food and Drugs) Regulations**
- **Public Health (Bakeries) Regulations**
- **Public Health (Slaughtering of Animals & Slaughterhouses) Regulations**
- **Public Health (Animal) Regulations**

With regard to food safety, the enactment of regulations should be given immediate priority in order that deficiencies may be addressed. The revised framework should provide for food hygiene inspections of markets (fish, dairy), restaurants, bakeries, supermarkets to ensure optimum sanitation conditions and practices, stricter regulation of mobile vendors and penalties for non-compliance, registration of mobile/sidewalk vendors of food and drink, especially where items are processed at home. Consumer protection legislation should also be enacted to discourage businesses from engaging in fraudulent practices.

There are many agencies involved in performing responsibilities related to environmental health in the BVI. These include the Solid Waste Department, the Conservation and Fisheries Department, National Parks Trust, Town and country planning, Development Planning Unit, the water and Sewerage Department and the Agriculture Department. Some measure of inter-sectoral co-ordination takes place among these agencies within the BVI governmental structure and several committees have been established to facilitate this co-ordination. Notwithstanding, the operational strength of the Environmental Health Division is limited and in most cases a lack of training or resources has its impacts upon the efficiency of the Department in discharging its responsibilities.
APPENDIX I

Summary of Regional Conclusions

Water Quality/Wastewater Management

As in other regions of the world, activities related to human settlements, agriculture and industry have been identified as major contributors to the pollutant loads reaching coastal and marine waters of the Caribbean. In order to mitigate and control the impact of these pollutants it is essential that the equality and levels of discharges be reduced. Sewage and industrial effluents have been identified as two of the most significant pollutants affecting the coastal and marine environment of the Caribbean. In response to this and recognising the health implications of pollution and the need to protect the health of human beings and to sensitise people to environmental problems CEHI developed guidelines for sewage and the more important industries in the region. While these guidelines are actively being considered in relation to the development of a Protocol on Land Based Sources of Marine Pollution; not much work with regard to their adoption as the basis for the development of national standards is taking place within the individual PAHO-project countries. The results of an assignment by the Consultant reveal that there is a general interest on the part of the officials within the countries that were visited in the adoption of national standards for both sewage and industrial effluent, though sewage tended to occupy a higher priority.

Sewage disposal issues also occupy a high priority in the project countries particularly due to the importance of the tourism industry to the national economy. Because of the pressing economic problems that prevail however, activities for the adoption of the guidelines do not occupy a high priority. The officials will require active support to promote the activity.. A lack of resources, both human, technical and financial is prevalent among all of the countries visited and it is very clear that it will be necessary that serious consideration be given to the provision of appropriate assistance to not only adopt national standards but also to implement and effectively enforce them.

Generally, there is considerable public concern in all the countries visited, about the impacts of contamination from sewage and industrial effluent on the coastal and marine environment and its impact on the domestic water supply. In relation to this it was the prevailing view that activities to promote the adoption and later implementation and enforcement of national standards for discharges should be on a regional basis and include all POEC countries. The information obtained would be useful in developing a regional proposal for funding from the international donor community. This initiative by PAHO to promote and support improvements in the legislative framework for wastewater management in five selected countries has laid the groundwork for the commencement of activities to adopt national standards for sewage and industrial effluent and has heightened awareness among officials.

A public awareness programme involving health, environment, tourism, water authorities and industry should be undertaken by PAHO to sensitise decision-makers and the public generally, to the adverse environmental, health and economic effects of
pollution of the coastal and marine environment and drinking water sources, caused by wastewater discharges. Environmental audits should be required annually for existing businesses to improve wastewater generation and disposal.

In the regional context support from regional agencies such as PAHO and CEHI should be obtained to support a multi-step process for setting regional and national standards consisting of recommending guidelines, adopting regional guidelines and enacting national standards. Once the Guidelines are adopted the emphasis shifts from the regional to the national level. Training programmes for environmental health inspectors to approve applications, licences, inspect and monitor waste water treatment plants, including control sampling and enforce Acts and Regulations should be conducted. Activities for the strengthening of laboratory capabilities should also be included in the regional work programme.

**Drinking Water Quality**

It is recognised that PAHO-POEC States have made rapid progress in the water sector during the past decade. In general, progress in the water sector has achieved basic professional standards of operation and have succeeded in meeting some of the most critical water quality objectives. The success of the achievements in providing piped drinking water supplies to a high percentage of the region’s population, as well as protection from water-borne diseases, has generated expectations of even greater reliability and quality.

A key organisational rule is that the institutional and legal arrangements for the monitoring of drinking water quality could only be achieved through intersectoral coordination. This should include not only the agencies in charge of supplying water and promoting environmental health but also the set of institutions with responsibility for development and education. Those agencies that are responsible for the protection of environmental health and for the supply of water should consult with one another in order to agree on safe and feasible water quality standards. Local communities should also become involved together with major water users, including industrial or agricultural users, which may compete for the same source or water supply.

Drinking water quality legislation should clearly define that the water supply agency is legally responsible for the continuous quality of the water sold and/or supplied to the consumer and for proper supervision, maintenance, inspection and the safe operation of the water supply system. It is the water supply agency that provides water to the public. This agency should therefore be held legally responsible for the quality of the water up to a certain point in the distribution system. The Environmental Health agencies should therefore be responsible for monitoring and enforcing the prescribed standards for drinking water quality against these water suppliers.
Regulations should also place controls on the use of bottled water or water truck delivery services. A proposal has been made for the establishment of an independent certification of bottled water sources on a regional basis. Quality assurance should also be introduced and monitored by water supply agencies and certified laboratories. A network of regional reference laboratories, such as CEHI, should be identified which can provide the necessary technical support, advanced analytical services and assess quality assurance.

Legislation to protect water sources from contamination should also be introduced and should contain provisions for the protection of catchment areas, the conservation of water resources, the orderly development and use of water resources for other than domestic purposes, and for the collection, treatment and safe disposal of sewage to control pollution.

**Food Safety**

Food legislation at all levels is paramount to good health and healthy living. The general objectives of the legislation are to provide a safe food supply which is nourishing, unadulterated and to set compliance standards in accordance with other agencies, to prevent the sale of unwholesome products, provide a vehicle for information exchange between food producers and the consumer and employ current technologies.

The legislative framework for the countries under study are in need of review. They lack appropriate standards, provisions for public awareness and education, information gathering and dissemination and for the most part rely on outdated technologies for enforcement. The regulations that deal with codes of sanitation, good manufacturing practices, packaging components, processing and labeling requirements and risk detection and assessment and such as CODEX Alimentarius and HACCP should be incorporated in the regulatory framework in so far as they are practicable, implementable and enforceable.

**Environmental Health Legislation**

Though seriously outdated, the *Public Health Acts* are the main legislative vehicles for addressing environmental health issues in Anguilla, BVI, Dominica, Grenada, and St. Kitts... It does not address important issues of wastewater management including the discharge of untreated sewage, waste reduction, collection, storage transport, recycling or any of the present day concepts regarding waste management. As such, the scope of the legislative framework for environmental health revolves around the maintenance of general sanitary conditions and cleanliness.. Growing development pressures eventually will require intensified control over environmental pollution and waste disposal.

A revised framework should introduce compliance and enforcement techniques such as standard setting rather than be based upon nuisance theory solely. Environmental standards based on a no-discharge level could even be considered for some activities such as marinas. These Acts are also deficient in implementation machinery and should be revised to include provisions for sampling, monitoring and compliance procedures.
Water quality testing needs to become more regularised with stronger monitoring and enforcement powers over activities over both drinking water supplies and water used for other purposes.

The principal objective of the revised legislative framework for environmental health should therefore be to broaden the scope of the public health aspects of the legislation and to establish appropriate institutional arrangements to support, co-ordinate and direct relevant environmental health activities.

Far too often the proper enforcement and implementation of parent legislation is undermined by the absence or inadequacy of regulations. The deficiencies of the Public Health Acts of Anguilla, BVI, Dominica, Grenada and St. Kitts will have to be addressed through comprehensive environmental health legislation. Taking into account the unavailability of resources to undertake this task, some of these deficiencies may be corrected by appropriate implementing regulations and may improve the existing legal and enforcement capabilities of environmental health agencies in the immediate and short term. A greater rationalisation of legislation and functions of various departments and agencies in similar or overlapping areas is also required. In some instances, enforcement measures will have to be upgraded and in a large number of cases penalties are inadequate. Finally, legislative efforts must be supported by ancillary factors such as education and public awareness.

Public health and environmental protection is a multi-faceted issue. The project countries, the subject of this study, evidence the need for greater harmonisation between the legislative framework of even related agencies. The need for sharing information and experiences among other Caribbean countries and institutions such as CEHI is also proposed. Because the task of law revision in environmental health is substantial and lengthy, international donor support might be obtained from agencies such as PAHO.
APPENDIX II

List of Persons/Organisations Consulted

During Consultant Missions:

Dr. Irad Potter, Director of Health Service__Dr. Francis G. Longworth, Director of Primary Health Care__Ms. Dancia Penn, Honourable Attorney General __ Mr. Aubrey George, Chief Environmental Health Officer__Ms. Noni Georges, Laboratory Technician, Mr. Gary Penn, Laboratory Technician, Ms. Stella Okechukuru, Laboratory Technician.

During Stakeholder Workshop:

Mr. David Turnbull, Mr. David Barry, Ms. Bernice Freeman, Mr. Paul Dias, Ms. Nadira Singh, Mr. Arthur de Costa, Mr. Alfred Reid, Mr. Michael E. Davis, Mr. Leland Dennis, Ms. Avelina Freeman, Ms. Carmel Smith, Mr. Minchington Israel.

.............
APPENDIX III

Legislative Policy Brief for the revision of legislation pertaining to Food Safety, Water Quality and Public Health

1. Introduction

The subject matter for consideration is the revision of the Public Health Ordinance, the Public Health (Nuisance) Regulations of 1977 and the Public Health (Food Hygiene) Regulations, 1972.

Public health legislation in the BVI has become outdated and irrelevant in many ways to the needs and requirements of a modern developing society. The Government of the British Virgin Islands, has as a result, been experiencing difficulties in implementing its implementing its environmental health programme. The Pan American Health Organization has been supporting national efforts to reform the legislative framework to improve environmental health conditions in the country. In this regard, conclusions and recommendations have been made for strengthened legal framework for environmental health generally and for food safety and water quality.

2. Background

The legislative framework for environmental health has received little attention in the BVI. In terms of the environmental problems currently demanding solution, much of this legislation is obsolescence, while one or two enactments are virtually obsolete. Except for the Litter Ordinance, which was passed in 1987, the most relevant environmental health legislation dates back to 1969 - the Public Health Act. The Food Hygiene Regulations, which are made thereunder, was enacted in 1972. These pieces of legislation however do not provide a comprehensive framework for environmental health and for ensuring food safety and water quality in the BVI.

Several activities have been conducted by the Ministry of Health in the interest of achieving legislative reform. With technical assistance from PAHO the following activities were conducted:-

- An inventory of all relevant legislation on environmental health, food safety and water quality;

- Conduct of a Stakeholder Workshop on 28th February, 2000, involving ministry and environmental health officials and representatives from other Government agencies;

- Discussions with officials of other relevant agencies;

- Recommendations for strengthening the legislative framework.
3. Issues for Consideration

The results of the several activities that were conducted have all agreed that the Public Health Ordinance, the Public Health (Nuisance) Regulations, the Public Health (Food Hygiene) Regulations, 1972 and the Water Supply Ordinance of 1956 are in need of revision. Several pieces of draft regulations have for some time been prepared and should also be reviewed. The principal provisions regarding these revisions should address:-

(a) **Scope, powers and functions of environmental health**

The exiting scope and definition of environmental health contained in the Public Health Ordinance, is too narrow. It is also equally weak and does not include provisions for standard setting, monitoring and the establishment of modern criteria to promote environmental health quality.

It does not adequately address or correct environmental health problems such as the disposal of liquid and solid waste, the discharge of untreated sewage, waste reduction, collection, storage, transport, recycling or any of the present-day concepts regarding waste management, air, noise or marine pollution. As such, the scope of this legislative instrument revolves around the maintenance of general sanitary conditions and cleanliness.

It was recommended that a revised *Public Health ordinance* should introduce modern day compliance and enforcement techniques such as standard setting. It should establish the power of the Environment Department to conduct baseline research as well as provisions for the institution of class action suits. This latter mechanisms has been found to be very useful especially where enforcement capability is low; similarly with regard to the use of incentives to encourage environment-friendly practices.

(b) **Food safety**

In general, the existing food safety regulations are in need of revision to establish firstly, a comprehensive legislative framework for its management and importantly to incorporate adequate enforcement powers for food handling and safety in the BVI. The existing drafts that have already been prepared should be considered in the revision exercise. Specific amendments that will be required to be made are as follows:-

(i) Inspection requirements for food establishments should be formally established in legislation and should include food storage conditions, physical infrastructure, workers and food handling practices.

(ii) in collaboration with the Town & Country Department, regulations should be prescribed for the physical integrity of buildings housing food and for the involvement of Public Health Department in the development approvals process for food establishments;
(iii) the Trade Department should be required to collaborate with the Public Health Department in the issuance and renewals of permits to seasonal vendors. Existing food handlers’ clinics are inadequate and need to be improved to include training activities for all vendors before licences are issued. The regulations should make it mandatory that vendors attend training activities;

(iv) standards should be prescribed for stall infrastructure, utensils and clothing and guidelines for seasonal vendors should also be prepared

(v) the Public Health Department should be vested with the power to:

(a) revoke, suspend and modify licences;

(b) designate “environmentally safe surroundings” for the sale of food;

(c) establish conditions in the licence.

(vi) the power to enter and inspect commercial home preparation sites and sites for event food preparation such as bazaars etc. should be prescribed;

(vii) the definition of “food handler” should be amended to mean “ any person engaged in any activity in a food establishment”;

(viii) the power to condemn food should be vested in the Public Health Officer, with appeals to the Chief Public Health Officer and court;

(ix) regulations establishing procedures for the closure of food establishments, seizure, sampling should be prescribed;

(x) Public Health Department should work along with the Veterinary Department and be involved in port health inspections;

(xi) guidelines for transportation, storage, packaging for the importation of food should be adopted;

(xii) training of public health officers in sampling, prosecution, laboratory analysis;

(xiii) collaborative mechanisms between the Departments of Agriculture, Customs & Excise and Health should be prescribed.
(c) **Water Quality**

(a) collaboration between the Public Health Department and the Town & Country Department with regard to development approvals should be mandated in regulations;

(b) drinking water quality standards, taking into account the *WHO Drinking Water Quality Guidelines* and new technologies;

(c) the role, functions and actions of the agencies relevant to maintaining drinking water quality should be clarified;

(d) penalties for breach of regulations should be revised upwardly;

(e) a Bureau of Standards should be established;

(f) water bottling handlers should be required to be certified by the Public Health Department;

(g) all applications in respect of sewage facilities should be reviewed by the Health Department before planning approval is granted;

(h) a certificate of approval for waste disposal systems should be required for all buildings before occupation is permitted;

(i) a zoning plan defining the responsibilities between government, private sector and civil society and the associated regulations should be prescribed for the BVI;

(j) standards for the discharge of effluent should be established with appropriate penalties for breach attached; the polluter pays principle should apply in assessing those penalties;

(k) standards for bathing, recreational and public water courses water quality should be at the highest standard in accordance with WHO recreational water quality guidelines;

(l) the monitoring of domestic, industrial, commercial and recreational waste water discharges should be regulated;

(m) a national laboratory to carry out laboratory services for water quality, food analyses, pesticides and toxic chemicals and soil analysis should be established.
4. Legislation (including draft legislation) that will be affected

- Public Health Ordinance
- Public Health (Food Hygiene) Regulations, 1972
- Public Health (Nuisance) Regulations, 1977
- Water Supply Ordinance, 1956
- Town Planning Act
- Draft Public Health (Inspection of Food and Drugs) Regulations, 1988
- Draft Public Health (Animal) Regulations
- Draft Public Health (Bakeries) Regulations
- Draft Public Health (Slaughtering of Animals & Slaughterhouses) Regulations
- Draft Public Health (Water) Regulations
- Draft Ground Water Monitoring & Control Bill, 1973

5. Time Factor

BVI’s activities regarding the revision of the legislative framework for environmental health, food safety and water quality has maintained the attention of PAHO which considers that the country’s bold initiative in addressing the weaknesses in the legislative framework for these areas can provide impetus for regional initiatives to harmonise the environmental health framework. PAHO is committed to seeing this exercise to completion.

There exists a heightened sensitivity, enthusiasm and awareness among public officials in the BVI which could stand to be lost should the momentum and the flow of activities be subjected to inordinate delays. The urgency of the task ahead in making the recommended amendments to the legislative framework cannot be overemphasised.

6. Recommendation

That amendments be made to the legislative framework for environmental health, food safety and water quality be made according to the recommendations specified herein.
APPENDIX IV

List of Acronyms

BVI - British Virgin Islands

CEHI - Caribbean Environmental Health Institute

PHO’s – Public Health Officers

HACCP - Hazard Analysis Critical Control Point Evaluations

PAHO - Pan American Health Organisation

UNCED - United Nations Conference on Environment and Development

WHO - World Health Organisation
APPENDIX V

Selected Bibliography


