A CONCEPT NOTE ON TRADE IN ENVIRONMENTAL SERVICES: TOWARDS THE FORMULATION OF A STRATEGIC FRAMEWORK AND ACTION PLAN FOR THE CARIBBEAN COMMUNITY SINGLE MARKET AND ECONOMY[1]

Prepared by
CaribInvest (West Indies) Ltd[2].
For
The Caribbean Community Secretariat

January 2009

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A Concept Note on Trade in Environmental Services: Towards the Formulation of a Strategic Framework and Action Plan for the Caribbean Community Single Market and Economy (CSME).

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CaribInvest (West Indies) Limited welcomes feedback, comments and suggestions on this document as this is considered as work in progress, as the Caribbean Community and its Member States undertake policy measures to develop the service sector in the CSME Zone. The feedback should be sent to CaribInvest (West Indies) Ltd. At info@caribinvestwiltd.com or uploaded via info@caribinvestwild.com/contact.html

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TABLE OF CONTENTS

TABLE OF ABBREVIATIONS

BFREE	Belize Foundation for Research and Environmental Education
BOO	Built Operate Own
BOT	Built Own Transfer
BPOA	Barbados Programme of Action
CAP	Community Agricultural Policy
CARICOM	Caribbean Community
CARIFORUM	Caribbean Forum of African, Caribbean and Pacific States
CCCCC	Caribbean Community Climate Change Centre
CCESI	Caribbean Community Environmental Standards Institute
CCJ	Caribbean Court of Justice
CCP	Cruise Line Seasonal Passport
CCTF	Caribbean Community Trust Fund
CDEMA	Caribbean Disaster and Emergency Management Agency
CDERA	Caribbean Disaster Emergency Response Agency
CEHI	Caribbean Environmental Health Institute
CENRPF	Community Environment and Natural Resource Management Policy Framework
CIP	Community Industrial Policy
CNIRD/PISLM	Caribbean Network For Integrated Rural Development/Partnership Initiative on Sustainable Land Management.
COTED	Committee on Trade and Economic Development
CPC	Central Product Classification
CREW	Caribbean Revolving Fund For Waste Water Management
CROSQ	Caribbean Regional Organisation for Standards and Quality
CSME	Caribbean Community Single Market and Economy
EC	European Communities
EU	European Union
EIA	Environmental Impact Assessment
EPA	Economic Partnership Agreement
EPP	Environmentally Preferred Products
ESDIF	Environment and Sustainable Investment Facility
ESDIF	Environment and Sustainable Investment Facility
GATS	General Agreement on Trade in Services
GEF	Global Environment Facility
HS	Harmonized System
ICTSD	International Centre for Trade and Sustainable Development
IADB	Inter-American Development Bank
LLCS	Low-lying Coastal States
MARPOL	International Convention for the Prevention of Marine Pollution from Ships, 1973 as modified by the Protocol of 1978 relating thereto (MARPOL 73/78) -
IMF	International Monetary Fund
MDG	Millennium Development Goals
MEA	Multilateral Environment Agreements
NAMA	Negotiating Group on Non-Agricultural Access
NGO	Non Governmental Organisation
NTFP	Non-Timber Forest Product
OECD	Organization for Economic Cooperation and Development
PPP	Public-Private Partnerships
RSF	Regional Sustainable Fund
RT	Revised Treaty
SIDS	Small Island Developing States
SIDS/TAP	Small Island Developing States Technical Assistant Programme
TNC	Trade Negotiating Committee
TOC	Treaty of Chaguaramas
UNCED	United Nations Conference in Environment and Development
UNCTAD	United Nations Conference on Trade and Development
WASA	Water and Sewage Authority
UNEP	United Nations Environmental Programme
WTO	World Trade Organisation

FORWARD

This paper provides a sound basis for the consideration of trade in environmental services in the CARICOM Single Market and Economy (CSME) Zone. In the absence of specific information and data on the environmental service sector in the CSME, this work is considered as work in progress. Since the activities which are undertaken in the Region to produce environmentally sound technologies and goods as well as services to measure, prevent, limit, minimize or correct environmental damage to water, air, soil and ecosystems, have not been regarded as an industry in its own right; a major function of this paper is to create awareness of the existence of an environmental industry in the Caribbean Community. It also serves to highlight, that like any other industry of the regional economy, investment must be made to sustain sustainability. This is also the case of the environmental industry. Furthermore, given the multi-dimensional and multi-sectoral characteristics of the environment, investment in the environment, which is required, is consequently an investment in the social and economic development of the CSME.

It is on this philosophical basis that the work of CaribInvest (West Indies) Limited is grounded. Central to its philosophy, is the promotion of the Caribbean as a single market place and in so doing facilitate the utilisation of the region's assets efficiently, effectively and where applicable in an environmentally sensitive and sound manner. CaribInvest (West Indies) Limited employs an integrated approach in the consideration of the Community's assets by linking various elements such as investment, finance and international trade with proper environmental stewardship. It is within this context, that the Caribbean Court of Justice (CCJ) has a very critical role to play in ensuring that the environmental and natural resources provisions of the *Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy* are given the full effect of Caribbean Community Law.

Underpinning the consideration of trade in environmental goods and services in the CSME Zone is the pivotal role played by the environmental and natural resource base in the social and economic development of the Region. Yet any environmental damage which results from other economic activities is not adequately reflected in economic valuation. The need therefore exists, to measure environmental damage and to ensure that growth exceeds environmental loss; and that part of that growth is used to reduce and compensate for environmental damage, so that growth could be put on a more sustainable path.

The concept paper is divided into five sections. The *Introduction* provides the overall legal context for the consideration of trade in environmental services in the CSME Zone. It argues the case, that in addition to the Community Industrial Policy and the Community Agricultural Policy, a third dimension—the protection of human, animal and plant life or health and the sustainable management and utilisation of the Community's natural resources—can be carved out, as a distinct policy framework. *Section two* places the consideration of trade in environmental service in the CSME, within the broader international context of the negotiations taking place in the WTO on trade in service. The various classification schemes which are being used to define environmental goods are reviewed and the difficulties highlighted. The scope and nature of the environmental service sector is addressed in *Section three*. Drawing on the various classification systems which exist; a classification system for environmental services that better reflect the reality in the CSME Zone is proposed and used as a basis for examining the structure of the sector.

Section four addresses the creation of an enabling environment to facilitate the growth and expansion of the environmental sector in the CSME. Issues which are highlighted include the need for the completion of the establishment of the legal and institutional modalities necessary for the effective implementation of the "*full integration of the national markets of Member States of the Community into a single, unified and open market area*", pursuant to Article 78.2. (a).RT; one of the fundamental objectives of the Caribbean Community. Section Five examines the present and future opportunities including the potential factors which are likely to affect the growth of environmental services within the CSME Zone. The final section—*Section Fi*ve—propose recommendations with respect to legislative changes, policy action and data gaps.

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1. INTRODUCTION

The development of the service sector, pursuant to Article 54 of the *Revised Treaty of Chaguaramas Establishing the Caribbean Community Including the CARICOM Single Market and Economy* (hereafter referred to as either the Revised Treaty or RT), is to stimulate economic complementarities and accelerate economic development in the Caribbean Community and its Member States. The development of the service sector in the Caribbean Community is an integral part of the Community Industrial Policy (CIP), which has as its goal; market-led, internationally competitive and sustainable production of goods and services for the promotion of the Region's economic and social development[3].

The CIP along with the Community Agricultural Policy (CAP) form the backbone of the Community's production integration[4] framework. However, it has been argued[5] that a third dimension—the protection of human, animal and plant life or health and the sustainable management and utilisation of the Community's natural resources——can be carved out of the CIP and CAP, as a distinct policy framework.

This dimension includes, but not limited to, environmental protection; natural resources management, including forests and oceans; land management and rural development; biodiversity and intellectual property elements of biodiversity; sustainable tourism development and a range of environmental measures including standards and technical regulations[6]. It also includes the use of the general exceptions, by Member States, pursuant to Article 226.RT, to justify RT inconsistent measures, but only if such measures do not constitute arbitrary or unjustifiable discrimination between Member States where like conditions prevail, or a disguised restriction on trade within the Community. The range of environmental related activity, pursuant to Article 111.1. (d).RT, which could benefit from subsidies, under certain circumstances, also constitutes part of the environmental and natural resources policy framework.[7].

The decision of the Ministers of Environment of the Caribbean Community[8] at the Twenty-Fifth Special Session [Environment] of The Committee on Trade and Economic Development (COTED) to mandate the formulation of a Community Environment and Natural Resource Management Policy Framework (CENRPF) is vindication of this approach. It is this dimension—the environmental and natural resource base—of the Community which forms an integral part of the environmental industry in the CSME Zone[9]. Generally, however, there is little appreciation of the existence of an environment industry in the CSME Zone. The environment industry consists of "*activities which produce goods and services to measure, prevent, limit, minimise or correct environmental damage to water, air, soil, as well as problems related to waste, noise and eco-systems. This includes cleaner technologies, products and services that reduce environmental risk and minimize pollution and resource use*"[10].

To support the protection, management and sustainable utilisation of the Community's environment and natural resource base, the Caribbean Community is mandated, pursuant to Article 58.RT, to adopt measures for:

a) *the effective management of the soil, air and all water resources, the exclusive economic zone and all other maritime areas under the national jurisdiction of the Member States; and*

b) *the conservation of biological diversity and the sustainable use of biological resources of the Member States, especially those of important medicinal and traditional value.*

[3] Article 51.1.RT

[4] Includes, *as per* Article 52.8.RT: (a) the direct organisation of production in more than one Member State by a single economic enterprise;(b) complementary production involving collaboration among several economic enterprises operating in one or more Member States to produce and use required inputs in the production chain; and (c) co-operation among economic enterprises in areas such as purchasing, marketing, and research and development.

[5] See Griffith M.D., Understanding the Caribbean Community and Its Single Market and Economy: The Shaping of Its Legal and Institutional Structures. Prepared for CaribInvest (West Indies) Ltd., and is currently in the final stages of preparation. Due to be published during the second quarter of 2009.

[6] Griffith, M.D. and D. Oderson, the Strengthening of the Inner Circle: The Case of the Caribbean Community. Prepared for CaribInvest (West Indies) Ltd., CaribInvest (West Indies) Ltd, February 2009.

[7] Ibid.

[8] See the CARICOM Secretariat, Conclusions of Twenty-Fifth Special Session [Environment] of The Committee on Trade and Economic Development (COTED), April 2008, Georgetown, Guyana.

[9] The CSME Zone is used to encompass those countries of the Caribbean Community that are part of the CSME. These include Antigua and Barbuda, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago and Suriname.

[10] OECD/Eurostat, OECD and the Statistical Office of the European Communities, the Environmental Goods and Services Industry: Manual for Data Collection and Analysis, 1999, OECD Publication, Paris.

and pursuant to Article 65.RT, to promote measures to ensure:

a) the preservation, protection and improvement of the quality of the environment;

b) the protection of the life and health of humans, animals and plants; and

c) the adoption of initiatives at the Community level to address regional environmental problems.

In addition, the Committee on Trade and Economic Development (COTED) in the implementation of the CIP is mandated, to have regard to the provisions of the RT relating to environmental protection[11].

Trade in environmental goods and services are an integral part of the Caribbean Community production integration framework. More specifically, trade in environmental services is an essential part of the mandate which Article 54.RT, imposes on the Caribbean Community and its Member States. In response to this mandate, the Caribbean Community (CARICOM) Secretariat is convening a Regional Symposium on Services to (a) Identify the elements of a Draft Strategic Plan for Services in the CARICOM Single Market and Economy (CSME) and (b) Develop a Plan of Action for the five-year period 2010–2014. It is for this purpose that this concept paper was commissioned.

This paper is therefore prepared within the parameters outlined by the Caribbean Community Secretariat for the preparation of inputs into the Regional Symposium on Services and is considered as work in progress. It is considered within the constituent legal framework for the Caribbean Community, the RT, for which there is little precedents to follow with respect to its interpretation and application[12]. More importantly, it provides an opportunity for the Member States to reflect on their environmental stewardship and to decide on the role environmental and natural resource management, has and will continue to play in the future development of the CSME Zone.

The purpose of this concept paper is to highlight some of the key issues which have and continues to impact on the evolution of the environmental service sector in the CSME Zone. It also explores the factors which could result in contributing to increasing the demand for the provision of such services, both within and outside of the CSME Zone. As a context, it presents an overview of the international legal framework for trade in services, of which environmental services are a part. It also examines the difficulties associated with the definition and classification of environmental services, as well as the various classification schemes being considered by the international community, particularly, within the context of the negotiations on trade in environmental services taking place in the World Trade Organisation (WTO).

More specifically, the concept paper provides an overview of the scope and coverage of the environmental services sector in the CSME Zone, including the applicability of the various classification schemes. In this regard, additional classes of environmental services reflecting the situation in the Small Island Developing States[13] (SIDS) of the Caribbean Community are suggested for inclusion in the existing classifications. It also examines the creation of an enabling environment which is conducive to the further development and growth of the environmental service sector in the CSME Zone.

In this regard, consideration is given to the regional, legal and institutional, policy framework and its implications for the development of the service sector in the CSME Zone. Other issues which are addressed, include, *inter alia*, financing and investing in the environment and the implications of these for the sector's needs; incentives and institutional requirements, in particular of Government and industry, human resource requirements; access to and use of technology; as well as the constraints to achieving these; the opportunities for trade agreements and for enhancing competitiveness within and among sectors. A brief situational analysis of what are the present and future anticipated opportunities for the development of the sector in the CSME Zone based on demand both regional and global is presented as well as a number of recommendations with respect to policy actions, data gaps and legislative changes.

[11] Article 51.5.RT

[12] The first case to be adjudicated by the Caribbean Court of Justice in its Original Jurisdiction is Trinidad Cement Limited and TCL Guyana Incorporated v. The Co-operative Republic of Guyana, Interim Order, CCJ Application No. AR 1 of 2008, [2008] CCJ 1 (OJ**)**

[13] SIDS as used in this document includes the Low-lying Coastal States (LLCS)—Belize, Guyana and Suriname—of the Caribbean Community.

2. INTERNATIONAL LEGAL FRAME-WORK FOR TRADE IN SERVICES, INCLUDING ENVIRONMENTAL SERVICES

The General Agreement on Trade in Services (GATS): It's Relevance to Trade in Environmental Services.

The principles and rules governing trade in environmental services are contained in the World Trade Organisation (WTO) discipline of the General Agreement on Trade in Services (GATS). The GATS came into force on January 01, 2005, and is the first comprehensive, legally binding, international, multilateral instrument covering trade in services. The Service Sectoral Classification List forms the basis for the consideration of trade in services in the WTO. It contains twelve classes of services, including environmental services[14] (Annex 1).

The call by the Doha Ministerial Declaration for "the reduction or, as appropriate, elimination of tariff and non-tariff barriers to environmental goods and services"[15], signals the international community commitment to the liberalisation of environmental goods and services. Despite the synergies between environmental goods and services, these are addressed by separate negotiating forum in the WTO. The former is addressed by the Negotiating Group on Non-Agricultural Access (NAMA) and later by the Special Session of the Council on Trade in Services.

A related instrument in the context of trade in environmental services is the Ministerial *Decision on Trade in Services and the Environment.* The Ministerial Decision, while acknowledging that measures necessary to protect the environment may conflict with the provisions of the GATS; notes that since measures necessary to protect the environment typically have as their objective the protection of human, animal or plant life or health, it is not clear that there is a need to provide for more than is contained in paragraph (b) of Article XIV of the Agreement[16]. In order to determine whether any modification of Article XIV of the Agreement is required to take account of such measures, the Committee on Trade and Environment is mandated to examine and report, with recommendations if any, on the relationship between services, trade and the environment including the issue of sustainable development[17].

Under the GATS, commitments made by Member States of the WTO cover those sectors and "modes of supply" that are explicitly listed and subjected to liberalisation in their schedules of commitments. Three levels of commitments may be made by Member States. Commitments that are full binding, represents the full coverage of the sector and a "none" entry against a particular mode of supply with respect to both market access and national treatment, denoting the absence of any limitations[18].

Those which are designated "unbound" against the relevant mode, with respect to both market access and national treatment or with respect to market access only are considered as no bindings[19]. The third level of commitment are the intermediate case of limited bindings, which refer to those entries which are conditioned in some way by a limitation, which may be on coverage (geographical, sectoral, or modal), or in the form of a restrictive measures (which can be one or more of the six types of restrictions listed in Article XVI or any measure inconsistent with the national treatment obligation in Article XVII)[20].

The modes of supply of services, pursuant to Article 1.2., of the GATS are:

a) Cross-border supply (Mode 1) from the territory of one Member into the territory of any other Member;
b) Consumer Abroad (Mode 2) in the territory of one Member to the service consumer of any other Member;
c) Commercial Presence (Mode 3) by a service supplier of one Member, through commercial presence in the territory of any other Member;
d) Presence of a Natural Person (Mode 4), by a service supplier of one Member, through presence of natural persons of a Member in the territory of any other Member.

[14] See World Trade Organisation (WTO), MTN.GNS/W/120, Services Sectoral Classification List, Note By The Secretariat, 10 July 1991.
[15] Paragraph 31(iii) of the Doha Ministerial Declaration. Adopted on 14 November 2001 by the Ministerial Conference, Fourth Session, Doha, 9 - 14 November 2001.
[16] Decision on Trade in Services and the Environment
[17] Ibid.
[18] See World Trade Organisation (WTO), Environmental Services, Background Note by the Secretariat, S/C/W/46, 6 July 1998 (98-2690).
[19] Ibid.
[20] Ibid.

Not all the modes are considered to be of equal relevance to environmental services. Mode 1—cross-border supply—and Mode 2—consumption abroad—are considered to be of limited relevance for environmental services, even though there may be scope for utilising these modes for certain support services[21]. There are however differences between Member States on the feasibility of Mode 1 in the context of environmental services. A number of the 48 Member States which made commitments during the Uruguay Round left Mode 1 "Unbound" for lack of feasibility.

The issue of the feasibility of cross-border provision of environmental services, and in particular the scope of commitments under mode 1 was the subject of consideration by an informal Group[22]. From those discussions, it was concluded that the full commitments for Mode 1 should, in principle, not create problems in most areas of environmental services. Whereas the provision of infrastructure services such as waste management, or waste water management, usually requires the physical presence of the services supplier in the market; consultancy related to such services (e.g. the design and development of a waste management plan, consulting on environmentally friendly solutions for waste water disposal) can be supplied on a cross-border basis; hence, it would seem that, for example., consultancy in these sub-sectors can be committed for Mode 1. However, since most environmental consultancy services are closely linked with services supplied under Mode 4, commitments for such consultancy services supplied under Mode 1 should be accompanied by a clear definition of environmental consultancy services.

The GATS recognises - "the right of Members to regulate, and to introduce new regulations, on the supply of services within their territories in order to meet national policy objectives and, given asymmetries respect to the degree of development of services regulations in different countries existing with, the particular need of developing countries to exercise this right"[23]. However, the defining line as to what constitutes those services which are "…..supplied in the exercise of governmental authority", and are exempt from the Agreement and those which are supplied "neither on a commercial basis, nor in competition with one or more service suppliers" is unclear. This results in some measure of ambiguity with respect to the interpretation and application of the Agreement.

In sectors where specific commitments are made by Member States, pursuant to Article VI of the GATS, it requires that each Member ensures that all measures of general application affecting trade in services are administered in a reasonable, objective and impartial manner**.** However, pursuant to Article VI.4 of the GATS, allowance is made for the establishment and development of any necessary disciplines to ensure that measures relating to qualification requirements and procedures, technical standards and licensing requirements do not constitute unnecessary barriers to trade in services. The objective Article XVI on the other hand is to prohibit market access, as defined in Article XVI.2, unless scheduled.

Measures that constitute market access limitations within the meaning of Article XVI and which, unless scheduled *must be eliminated,* are to be distinguished from measures that impose qualification requirements and procedures, technical standards and licensing requirements, which *can be maintained* so long as they do not constitute "unnecessary barriers to trade in services", pursuant to the criteria contained in Article VI.5 or pursuant to the criteria to be developed by the Council for Trade in Services pursuant to Article VI.4[24].

The request-offer approach is the main method which is used to negotiate new "specific commitments". This should take place, pursuant to Article XIX of the GATS Agreement, with due respect for national policy objectives and the level of development of individual Members, both overall and in individual sectors. It should also allow appropriate flexibility for individual developing country Members for opening fewer sectors, liberalising fewer types of transactions, progressively extending market access in line with their development situation and when making access to their markets available to foreign service suppliers,

[21] Ibid.

[22] The Group comprised of the European Communities, Japan, New Zealand, the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu and the United States and their Communication circulated to the Members of the Council for Trade in Services on dated 9 February 2005 in WTO, Communication from the European Communities, Japan, New Zealand, the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu and the United States, TN/S/W/28, 11 February 2005, (05-0581).

[23] See Operative Paragraph 4 of the Preamble of the General Agreement on Trade in Service**.**

[24] World Trade Organisation, United States—Measures Affecting the Cross-Border Supply of Gambling and Betting Services, Report of the Panel, WT/DS285/R, 10 November 2004 (04-2687).

attaching to such access conditions aimed at achieving the objectives contained in Article VI on "*Domestic Regulations*".

At the global level, impediments exit which contribute to inhibiting the reduction or eliminating existing restrictions on national treatment and market access as well as on the broadening of commitments by Member States. Including in these impediments are those related to the lack of transparency of regulatory regimes and practices; investment/establishment, entry and stay of services managers, professionals and experts and licensing requirements[25]. They also include limitations on the type of legal entity required[26], non-transparent licensing procedures and unnecessary delays in processing and informing applicants, restrictive business practices and lax competition laws; inconsistent or arbitrary enforcement of environmental laws and planning restrictions; discrimination against foreign companies[27]; tax discrimination in favour of domestic firms; limitations on foreign investment (e.g., limiting equity to specific levels); and on the ownership of specific assets (such as landfills and sewage systems)[28]. The view[29] has been expressed that the cost of maintaining barriers in the environmental service sector may not only have a significant impact on costs and the variety of services provided, but act as a disincentive for the global diffusion of environmental technology, skills and expertise.

In terms of progress being made in the liberalisation of environmental service the Chairman of the TNC reported that there are indications of improvements across the range of environmental services, including: sewage services; sanitation services; refuse and solid waste disposal services; waste water management services; soil remediation and clean-up; environmental laboratory services; and other services related to air pollution control and noise abatement, as well as a willingness on the part of several participants to expand the modal scope of their commitments, and to reduce or eliminate restrictions such as joint venture requirements and foreign equity limitations[30].

DEFINING ENVIRONMENTAL SERVICES

A major challenge in the consideration of trade in environment goods and services is defining and classifying, exactly what constitutes environmental services. At the conceptual level, one can distinguish between the various concepts of environmental services. On the one hand, there are those services which comprise of the human services to address particular environmental and natural resources issues (i.e. waste water treatment *et al*).

On the other hand, there are those environmental services that are derived directly from the ecosystem themselves (i.e. release of water from a healthy watershed area), which have an economic value. However, the concept of payment for environmental services derived directly from the ecosystems, themselves, is yet to be mainstreamed into economic analysis. As this concept gains currency, a market for these services is likely to be created. It is however, the first concept of environmental services—trade in environmental services—which is the prime focus of this paper.

Defining and classifying environmental services are not a straight forward task, but complicated by the characteristics of environmental services, themselves. Environmental services are by their very nature, inter-sectoral; and hence overlap with other sectors. Many environmental services therefore fall within other GATS classifications sectors, which, for the purpose of the Agreement, are all mutually exclusive. In addition, the consumption of many environmental services takes on the properties as "public goods", and is treated as externalities. The capital investment required to deliver some environmental services in the public interest, creates a unique role for the involvement of the public sector in the provision of some environmental services. Furthermore,

[25] World Trade Organisation, Initial Negotiating Proposal on Environmental Services, Communication From Canada, Council for Trade in Services, S/CSS/W/51, 14 March 2001,(01-1407).

[26] For example, restrictions on number and location of subsidiaries and the requirement to incorporate locally.

[27] For example, high registration fees for foreign companies and lack of transparency in tendering processes.

[28] World Trade Organisation, Negotiating Proposal for Environmental Services, Communication From Australia, Council for Trade in Services, Special Session, S/CSS/W/112, 1 October 2001, (01-4715).

[29] World Trade Organisation, Initial Negotiating Proposal on Environmental Services, Communication From Canada, Council for Trade in Services, S/CSS/W/51, 14 March 2001,(01-1407).

[30] Report By The Chairman Of The TNC, Services Signalling Conference, JOB (08) 93, 30 July 2008.

environmental services are not a discrete set of business activities. Instead, different issues (i.e. hazardous waste, municipal waste, oil spills *et al*) require the application of different technologies and skills.

Existing Classifications

A number of classifications for trade in environmental services exist. The classification system most commonly used for the definition of environmental services is the Service Sectoral Classification developed during the Uruguay Round (often referred to as the W/CPC classification). This classification is based on the United Nations Central Product Classification (Provisional CPC), and classifies the environmental service sector as comprising of four sectors. These include: (i) sewage sector, (ii) refuse disposal services; (iii) sanitation and similar services and (iv) other (cleaning services for exhaust noise abatement services, natural and landscape protection services, and other environmental services not elsewhere classified), with their corresponding CPC.

The W/120 CPC Classification is a rather limited characterisation of environmental services which places emphasis primarily on pollution abatement technologies. It reflects the narrow, traditional notion of environmental services, which focuses on facilities that provide water and waste disposal treatment to the general public, often by the public sector. It therefore does not overlook the range of environmental services which are provided to industry; nor does it capture the changes which have taken place in the environmental industry over the past decade and a half and continues to take place.

A broader classification of the environmental industry is that of the OECD and Eurostat (1999), which characterized the industry into three main sectors, namely pollution management, cleaner technologies and products and natural resources management. The OECD/Eurostat classification is more comprehensive that that of the W/120 CPC classification. Notwithstanding, suggestions have been made for its amendment, particularly the Resource Management cluster of the classification. Lendo[31] in defining environmental goods and services in Mexico suggest the amendment of the OECD classification in order to incorporate goods and services with the potential to boost the sustainable development impacts from EGS liberalisation, particularly for Mexico.

The justification being that some countries could have a comparative advantage in the production of outputs from sustainable activities, such as Environmentally Preferred Products (EPP)[32]. This implies that the OECD/Eurostat categories comprising primarily *inputs* into activities such as sustainable agriculture and tourism will need to be supplemented by *outputs* derived from these activities (i.e. in the case of fisheries, sustainably harvested fish).[33]

The United Nations Conference on Trade and Development[34] (UNCTAD) in its classification of environmental services distinguish between three broad classes of environmental services. First are environmental infrastructure services, mainly related to water and waste management. These services have the characteristics of a "public good", and are heavily subsidised in many developing countries.

Secondly, are non-infrastructure, commercial environmental services, comprising most of the activities in Central Product Classification (CPC) Division 94, for example site clean-up and remediation, cleaning of exhaust gases, noise abatement, and nature and landscape protection. These are usually knowledge-intensive services, are provided on an integrated basis and generally not subject to market access and national treatment limitations. Instead, issues such as technology access and know how, capacity building, certification and recognition of qualifications (for both natural persons and companies), and "tied aid" as a restriction on trade become important considerations. The third category of environmental services distinguished by UNCTAD is those related services with environmental end-use, classified under different divisions in the CPC, for example construction or engineering services.

[31] Lendo, Enrique, Defining Environmental Goods and Services: A Case Study of Mexico. A Study Commissioned by the Commission for Environmental Cooperation, ICTSD Project on Environmental Goods and Services, Issue Paper No.1, October 2005, International Centre for Trade and Sustainable Development.

[32] Ibid.

[33] Ibid.

[34] United Nations Conference on Trade and Development, Report of The Expert Meeting On Definitions And Dimensions Of Environmental Goods And Services In Trade And Development, TRADE AND DEVELOPMENT BOARD Commission on Trade in Goods and Services, and Commodities, Expert Meeting on Definitions and Dimensions of Environmental Goods and Services in Trade and Development Geneva, 9–11 July 2003 held at the Palais des Nations, Geneva, from 9 to 11 July 2003. TD/B/COM.1/59, D/B/COM.1/EM.21/3, 27 August 2003.

Efforts have been made within the WTO, particularly by the Committee on Commitments to resolve the issues associated with the classification of environmental services and Member States have made submissions, in this regard. The most comprehensive submission, to date, has been made by the Europe Communities and their Member States[35]. A seven-part classification form the core environmental services, including (i) water for human use and waste water management; (2) solid and hazardous waste management; (3) protection of ambient air and climate; (4) noise and vibration abatement; (6) remediation and cleanup of soil and water; (6) protection of biodiversity and landscape and (7) other environmental and ancillary services.

The seven-point proposal by the EC and its Member States corresponds more or less to the OECD/Eurostat classification. The first class— water for human use and waste water management—of the EC classification addresses the entire water cycle. It also introduces the protection of biodiversity and landscape. Table 2.1 provides a comparison of the W/20; the OECD/Eurostat and the EC classifications.

The EC and its Member States[36] also propose a cluster approach to some environmental services: Environmental Services which could be subject to "Cluster" negotiations. Categories which were highlighted include business services–research and development–, consulting, contraction and engineering–; distribution–; transportation–, and other with environment components.

Though the consensus is that the EC and its Member States proposed classification forms a useful working basis for the negotiations, differences still exist. For example, Colombia proposes that the services: the implementation and auditing of environmental management systems; the evaluation and mitigation of environmental impact, and advice in the design and implementation of clean technologies[37] be included in the classification.

Using the EC classification as a basis, a Group[38], on the basis of informal discussion of proposals for a revision of the classification of environmental services, concluded that revisions of the proposed EC classification proposal were necessary to improve its clarity and consistency. One of the issues raised related to the definition of 'consulting services', as alluded to before. In this regard, it was considered that a clear definition of consulting services might be required in order to include such services in certain sub-sectors of environmental services. It would be logical that consultancy services in an area of environmental services (e.g. waste management solutions) may form part of that particular environmental services sub-sector. If not, it would be unclear where such services would be classified.

Another question raised by the Group relates to potential overlaps of environmental services with services such as research and development, technical analysis services, engineering, etc., which are classified elsewhere in GATS. Even though such services can have an environmental "end-use", the group did not consider it necessary to create a specific sub-category for these services in a revised classification of environmental services. They concluded that what is important is that any commitments cover the environment-related activity in the relevant service sectors in addition to 'core' environmental services, and that commitments are consistent across these sectors.

A consensual, definitive classification system for trade environmental services does not exist at the international level. However, given the non-binding nature of the scheduling guidelines, Member States are not obligated to use any one classification and are free to use any they prefer or develop one of their own. If any activity considered to be part of a new environmental service category is already part of another service sector, then it would need to be excluded from the sector where it currently resides to preserve the mutually-exclusive nature of the classification[39].

[35] WTO, Classification Issues in the Environmental Sector, Communications from the European Communities and their Member States, Committee on Specific Commitment, S/CSC/W/25, 28 September 1999, (99-4001). The original list was subsequent amended by S/CSS/W/38.

[36] WTO, Classification Issues in the Environmental Sector, Communication from the European Communities and their Member States, Committee on Specific Commitment, S/CSC/W/25, 28 September 1999, (99-4001).

[37] WTO, Environmental Services, Communication from Colombia, S/CSS/W/121, 27 November 2001, (01-6059).

[38] The Group comprised of the European Communities, Japan, New Zealand, the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu and the United States and their Communication circulated to the Members of the Council for Trade in Services on dated 9 February 2005 in WTO, Communication from the European Communities, Japan, New Zealand, the Separate Customs Territory of Taiwan, Penghu, Kinmen and Matsu and the United States, TN/S/W/28, 11 February 2005, (05-0581).

[39] See World Trade Organisation (WTO), Environmental Services, Background Note by the Secretariat, S/C/W/46, 6 July 1998 (98-2690).

The search for a common classification for trade in environmental services is further complicated by the increasing urgency on the part of the international community to find solutions for addressing climate change. This has given expediency to accelerating liberalisation on trade in low-carbon goods and service, an issue which currently does not fall within the remit of the WTO. Some of the key challenges, in this regard, include, *inter alia*, defining what constitutes low-carbon goods and services; the need for further research on various aspects of the issue and the implications of the ongoing negotiations within the WTO on the liberalisation of environmental goods and services.

Though the liberalisation of low-carbon goods and services is not the necessarily the same as environmental goods and services, there are close enough, that no low- carbon effort could conceivably be launched until there is some resolution of the WTO process[40]. It is therefore important that progress is made in the WTO on the liberalisation of trade in environmental services, in particular, in defining and classifying them in such a manner that broadens the scope to include the concerns of developing countries. This is a discussion which the Member States of the CSME Zone must take a more active role in.

[40] See the Summary Notes: Copenhagen Seminar on Trade and Climate Change, Session on Accelerating Liberalisation of Trade in Low-Carbon Goods and Services, June 18-20, 2008.

Table 2.1: Environmental Services: A Preliminary Comparison between the MTN.GNS/W/120 Classification, the *Management Group* of the OECD/EUROSTAT Classification and the Adjustments Proposed by the European Communities and their Member States to the MTN.GNS/W/120 Classification, S/CSC/W/25 as amended by S/CSS/W/38, 22 December 2000

MTN.GNS/W/120 CLASSIFICATION (WITH THE "OTHER" CATEGORY ELABORATED USING THE CPC)	OECD/EUROSTAT MANUAL CLASSIFICATIONS POLLUTION MANAGEMENT GROUP	COMMUNICATION FROM THE EUROPEAN COMMUNITIES AND THEIR MEMBER STATES
A. Sewage services (CPC 9401)	**Waste water management**	**Water For Human Use and Wastewater Management**
Sewage removal, treatment and disposal services Excludes collection, purification and distribution services of water (in CPC 18000) Excludes construction, repair and alteration of sewers (in CPC 51330) (GATS 3B civil engineering construction services)	Design, operation of systems or provision of other services for the collection, treatment and transport of waste water and cooling water. It includes design, management or other services for sewage treatment systems, waste water reuse systems, water handling systems	Water collection, purification and distribution services through mains, except steam and hot water - potable water treatment, purification and distribution including monitoring **[part of 18000, 69210, 86223, part of 94900]** Waste Water Services - removal, treatment and disposal of household, commercial and industrial sewage and other waste waters including tank emptying & cleaning, monitoring, removal and treatment of solid wastes **[9401, 94010, 9411, 94110, 94120]**
B. Refuse disposal services (CPC 9402) **C. Sanitation & similar services (CPC 9403)**	**Solid waste management**	**Solid/Hazardous Waste Management**
Refuse disposal services: Refuse collection and disposal services; collection services of garbage, trash rubbish and waste (household, commercial and industrial); transport services and disposal services; waste reduction services. Excludes dealing and wholesale in waste and scrap (in CPC 62118 and 62278; GATS 4 distribution services) Excludes R&D services on environment issues (CPC 85; GATS 1C Business services (R&D)) Sanitation and similar services: Sanitation and similar services including outdoor sweeping, snow and ice clearing. Excludes disinfecting/exterminating services for buildings (in CPC 87401; GATS (1F)(o) – Other Business Building Cleaning Services.) Excludes pest control for agriculture (CPC 88110; GATS 1F(f) services incidental to agriculture, hunting and forestry.	Design, operation of systems or provision of other services for the collection, treatment, management, transport, storage and recovery of hazardous and non-hazardous solid waste. It includes design, management or other services for waste handling (including collection of waste and scrap), operation of recycling plants. It includes services for outdoor sweeping and watering of streets, paths, parking lots, etc. Services for treatment of low level nuclear waste are included. Excludes high level nuclear waste. Excludes services for manufacture of new materials or products from recovered waste or scrap and subsequent use of these materials or products.	Refuse disposal services - hazardous and non-hazardous waste collection, treatment and disposal (incineration, composting, landfill) **[94020, 94211, 94212, 94221, 94222]** Sanitation and similar services - sweeping & snow removal [94030] - other sanitation services [94310, 94390]
D. Other services **Cleaning services of exhaust gases (CPC 9404)**	**Air pollution control**	**Protection Of Ambient Air And Climate**
Emission monitoring and control services of pollutants into the air, whether from mobile or stationary sources; concentration	Design, managing systems or providing other services for treatment and/or removal of exhaust gases and particulate	Services to reduce exhaust gases and other emissions and

MTN.GNS/W/120 CLASSIFICATION (WITH THE "OTHER" CATEGORY ELABORATED USING THE CPC)	OECD/EUROSTAT MANUAL CLASSIFICATIONS POLLUTION MANAGEMENT GROUP	COMMUNICATION FROM THE EUROPEAN COMMUNITIES AND THEIR MEMBER STATES
monitoring, control and reduction services of pollutants in ambient air.	matter from both stationary and mobile sources	improve air quality [94040, part of 94900] - services at power stations or industrial complexes to remove air pollutants - monitoring of mobile emissions and implementation of control systems or reduction programmes.
Noise abatements services (CPC 9405)	**Noise and vibration abatement**	**Noise and Vibration Abatement**
Noise pollution monitoring, control and abatement services, e.g. traffic-related noise abatement in urban areas.	Design, managing systems or providing other services to reduce or eliminate the emission of noise and vibration both at source and dispersed. Includes designing, management or other services for acoustic and sound-proof screens and street covering.	Noise abatement services - monitoring programmes, installation of noise reduction systems and screens [94050, part of 94900]
Other environmental protection services n.e.c. (CPC 9409) E.g. acidifying deposition ("acid rain"), monitoring, controlling and damage assessment services	**Remediation and cleanup of soil, surface water and groundwater.** Design, operation of systems or provision of other services to reduce the quantity of polluting materials in soil and water, including surface water, groundwater and sea water. Includes cleaning-up systems either in situ or in appropriate installations, emergency response and spills cleanup systems. Treatment of water and dredging residues are included. **Analytical services, data collection, analysis and assessment** Design, manage systems or provision of other services to sample, measure, and record various characteristics of environmental media. Includes monitoring sites, both operating singly and in networks, and covering one or more environmental medium. Health, safety, toxicology studies, and analytical laboratory services are included. Weather stations are excluded.	**Remediation And Cleanup Of Soil and Water** Treatment, remediation of contaminated/polluted soil and water - cleaning-up systems in situ or mobile, emergency response, clean-up and longer term abatement from spills and natural disasters - rehabilitation programmes (e.g. recovery of mining sites) including monitoring [part of 94060, part of 94900]
[Business Services – R&D natural sciences and engineering; CPC 85] as well as **Environmental Services – Other Services, CPC 9406, 9409**	**Environmental R&D** Any systematic and creative activity which is concerned with the generation, advancement, dissemination and application of scientific and technological knowledge to reduce or eliminate emissions in all environmental media and to improve environmental quality. Includes creative scientific and technological activities for the development of cleaner products, processes and technologies. It includes non-technological research to improve knowledge of eco-	

MTN.GNS/W/120 CLASSIFICATION (WITH THE "OTHER" CATEGORY ELABORATED USING THE CPC)	OECD/EUROSTAT MANUAL CLASSIFICATIONS POLLUTION MANAGEMENT GROUP	COMMUNICATION FROM THE EUROPEAN COMMUNITIES AND THEIR MEMBER STATES
	systems and the impact of human activities on the environment.	
[Construction and related engineering services (CPC 51330)]	Services related to activities for the construction and installation of facilities for: air pollution control; waste water management; solid waste management; remediation and cleanup of soil, water and groundwater; noise and vibration abatement; environmental monitoring; analysis and assessment; other environmental facilities.	
Other environmental protection services, CPC 9409; possibly also [5 – Educational Services – Other]	**Education, training, information** Provision of environmental education or training or dissemination of environmental information and which is executed by specialised institutions or specialised suppliers. Includes education, training, and information management for the general public, and specific environmental work place education and training. The activities of the general educational system are excluded.	
	2. CLEANER TECHNOLOGY AND PRODUCTS GROUP	
	Cleaner/resource efficient technologies and processes: Cleaner and resource efficient technologies decrease material inputs, reduce energy consumption, recover valuable byproducts, reduce emissions, minimise waste disposal problems, or some combination of these. **Cleaner/resource efficient products:** Cleaner or resource efficient products decrease material inputs, improve product quality, reduce energy consumption, minimise waste disposal problems, reduce emission during use, or some combination of these.	
	3. RESOURCE MANAGEMENT GROUP	
	Potable water treatment and distribution : any activity that produces equipment, technology or specific materials, designs, constructs or installs, manages or provides other services for water supply and delivery systems, both publicly and privately owned. It includes any activities aiming to collect, purify and distribute potable water to household, industrial, commercial or other users. **Recycled materials:** This class includes any activity that produces equipment, technology or specific materials, designs, constructs or installs, manages or provides other services for manufacturing new materials or products, separately identified as recycled, from recovered waste or scrap, or preparation of such materials or products for subsequent use.	

MTN.GNS/W/120 CLASSIFICATION (WITH THE "OTHER" CATEGORY ELABORATED USING THE CPC)	OECD/EUROSTAT MANUAL CLASSIFICATIONS POLLUTION MANAGEMENT GROUP	COMMUNICATION FROM THE EUROPEAN COMMUNITIES AND THEIR MEMBER STATES
Nature and landscape protection services (CPC 9406) Ecological system protection services, e.g. of lakes, coastlines and coastal waters, dry land, etc. including their respective fauna, flora and habitats. Services consisting in studies on the interrelationship between environment and climate (e.g. greenhouse effect), including natural disaster assessment and abatement services. Landscape protection services n.e.c. Excludes forest and damage assessment and abatement services (in CPC 881, GATS 1F(f). Services incidental to agriculture, hunting and foresting)	**Renewable energy plant :** This class includes any activity that produces equipment, technology or specific materials, designs, constructs or installs, manages or provides other services for the generation, collection or transmission of energy from renewable sources, including biomass, solar, wind, tidal, or geothermal sources. **Nature Protection:** activities to conserve or maintain the natural environment.	**Protection Of Biodiversity And Landscape:** Nature and landscape protection services - ecology and habitat protection - protection of forests and promoting sustainable forestry [part of 94060, part of 94900]
		Other Environmental & Ancillary Services
		Other services not classified elsewhere - other environmental protection services [part of 94090] - services related to environmental impact assessment [part of 94900]

SOURCE: World Trade Organisation (WTO), Environmental Services, Background Note by the Secretariat, S/C/W/46, 6 July 1998 (98-2690) and World Trade Organisation, GATS 2000: Environmental Services, Communication from the European Union and their Member States, Council of Trade in Services, S/CSS/W/38, and 22 December 2000, (00-5633).
Note: Items in square brackets belong to sectors other than environmental services in the MTN.GNS/W/120 classification

3. SCOPE AND NATURE OF THE ENVIRONMENTAL SERVICE SECTOR IN THE CSME ZONE

Definition and Classification of Environmental Services in the CSME Zone

The definition and classification of the environmental service sector in the countries of the CSME Zone, present similar challenges to those experienced at the global level. There is no common classification for environmental goods and services in the CSME Zone. In the absence of a common definition on trade in environmental services in the CSME Zone, consideration is given to the applicability of the various classifications, in particular, the W/120 CPC; the OECD/Eurostat and EC classifications to the situation in the CSME Zone.

To better reflect the reality in the CSME Zone, a classification scheme (Table 3.1) is devised, drawing, as necessary, on the existing classification. The proposed classification scheme for the CSME Zone comprise of four main clusters: Pollution Management Group, which corresponds more or less to existing classification; Information Knowledge/Capacity Enhancement Services and Cleaner Technology and Production Groups, respectively, which correspond to elements of the OECD/Eurostat classification and the Resource Management Group. The Information Knowledge/Capacity Enhancement Services Group is consistent with Article 54.3. (b).RT which establishes as a priority in the development of the service sector for the Community, the development of capacity-enhancing services, including education, research and development services.

It is in the Resource Management Group cluster where most of the additions have been made. Coastal and Marine Protection and Management are added to reflect the importance of the coastal and marine environments to the Member States of the Caribbean Community. This class encompasses the range of measures taken for the protection and conservation of the marine environment and enforcement. The Protection and Management of Natural and Cultural Heritage are also included as a specific class to reflect the need for the protection of the Region's natural and cultural heritage. The activities in this class also support the eco-tourism and heritage tourism efforts in the CSME Zone.

The class on Environmental Planning encompasses the whole gambit of environmental policy measures, including, *inter alia*, EIAs, services required to honour obligations under the Multilateral Environment Agreements (MEAs); and that of

Natural Hazard Risk Assessment and Management, reflects the Region's vulnerability to natural disasters and the need plan for any eventuality. The

Table 3.1. CLASSIFICATION OF ENVIRONMENTALSERVICES IN THE CSME ZONE
POLLUTION MANAGEMENT GROUP
Solid/Hazardous Waste Management
Recycled Materials
Waste Water Management
Air Pollution Control
Noise and Vibration Abatement
Remediation and Cleanup of Soils, Surface Water or Ground Water
INFORMATION KNOWLEDGE/CAPACITY ENHANCEMENT SERVICES GROUP
Analytical Services, Data Collection, Analysis and Assessment
Environmental Research and Development
Environmental Education, Training and Information
CLEANER TECHNOLOGY AND PRODUCTION GROUP
Cleaner/Resource Efficient Technologies and Process
Cleaner/Resource Efficient Products
RESOURCE MANAGEMENT GROUP
Renewable Energy
Water Resources Treatment and Distribution
Sustainable Biodiversity
Coastal and Marine Protection and Management
Protection and Management of Natural and Cultural Heritage
Environmental Planning
Natural Hazard Risk Assessment and Management
Sustainable Land Management
Sustainable Forestry Management
Other Environmental Services

Sustainable Land and Forest Management, classes, respectively, reflect the importance of these assets to the socio-economic development of the Community. The products and services which are derived from Non-Timber Forest Product (NTFP) are included in the Sustainable Forest sub-group.

Paucity of Data and Information

One of the constraints experienced in addressing trade in environmental services in the CSME Zone, is the paucity of information and data on the sector. The

situation with respect to the availability of data and information on the environmental industry in Barbados exemplifies this constraint: "…there is a dearth of hard data in relation to the environment industry in Barbados. This was particularly so in the area of environmental services. There is no systematic record of environmental services required locally, produced locally or imported"[41]. The Barbados situation exemplifies the situation throughout the CSME Zone. There is therefore a need for the systematic collection of data on environmental industry in the CSME Zone. This should form part of the modernisation process for the collection of statistics within the CSME Zone and probably form the basis for the establishment of a CariStat for the Caribbean Community.

To address data constraint an on-line perception survey[42] is designed to gather more specific information and data on the environmental service sector in the CSME Zone. The survey instrument covers a wide cross section of issues including, i*nter alia*, the classification of environmental services in the CSME; the nature and scope of the sector; factors necessary for the creation of an enabling environment for the expansion of the sector; Government expenditure on environmental services and procurement procedures.

Two main groups are targeted by the survey; the Member States through their Environmental Focal Point—the Ministry with responsibility for the Environment—copied to the Trade Policy Focal Points and the providers of environmental services particularly in Barbados, Guyana, Jamaica and Trinidad and Tobago. Using the classification in Table 3.1., as a guide, a search was undertaken using available information, particularly the telephone classifications to identify the enterprises in the CSME Zone that are listed as providing environmental services. The service providers were contacted in-order to ascertain their e-mail addresses. Only those enterprises which provided their e-mail addresses were included in the survey. The survey was conducted during the latter part of January and February, 2009.

[41] Whitehead, J, Research Report Study, Benefiting for Trade Liberalisation in Environmental Goods and Services: Identifying the Possibilities. Prepared for the Ministry of Energy and the Environment, Government of Barbados through the National Sub-Committee on Trade and Environment, September 2007.

[42] To gain access to the Survey, go to the CaribInvest (West Indies) Limited Website at www.caribinvestwiltd.com, go to Current and Up-Coming Initiatives and *click* on Survey on Environmental Services in the CSME. A subsequent publication will follow with a more detailed analysis of the Survey results.

The Structure of the Environmental Service Sector in the CSME

The environmental service sector has not evolved in a uniform manner in the CSME Zone, either by sectors or in individual Member States. The structure of the environmental service sector in the CSME Zone consists of public and private service providers as well as by civil society organisations. There is a close link between environmental goods and the provision of environmental services in the CSME Zone. In this regard, the provision of some environmental goods (i.e. the market penetration of solar water heater in Barbados) creates opportunities for environmental service.

At the Caribbean Community level, a number of the Caribbean Community organisations have been established within the framework of functional co-operation to provide specific environmental services. These include the Caribbean Environmental Health Institute (CEHI) in the area of environmental health services; Caribbean Disaster Emergency Response Agency (CDERA) recently renamed CDEMA for disaster management and response; the Caribbean Community Climate Change Centre (CCCCC) for climate change and the Caribbean Regional Organisation for Standards and Quality (CROSQ) for standards.

Pollution Management Group

Public sector participation is dominant in the traditional areas such as the provision of water and solid and liquid waste treatment and disposal facilities. These are areas which require large capital investments and are provided for the "public good". The provision of environmental services–solid waste collection and disposal; water and waste water management–requiring large capital investments are provided by the statutory public sector entities, such as Water and Sewage Authority (WASA) in Trinidad and Tobago and the Barbados Water Authority in Barbados in the case of water and waste water management. In solid waste management, the Trinidad and Tobago Solid Waste Management Company is one such example.

In respect to both solid waste and liquid waste disposal and management, a distinction can be made between the environmental services which are provided to the domestic economy and those which are provided to customers at the port of entry. This distinction is important, given that the Caribbean has one of the world's highest densities of ocean cruise

and therefore has the potential for the generation of large volumes of both liquid and solid wastes, which if not disposed of in a responsible manner, can create environmental problems. As an example, it is estimated that the Caribbean in 2000, had 21,510, 142 cruise bed days, generating in excess of 75 metric tons of waste[43]. This compares to 6,277,064 bed days in the Mediterranean generating close to 22 metric tons of waste for the corresponding year[44].

Though the Caribbean Sea has been accorded the status of Special Area in 1993 under Annex V of the MARPOL 73/78 Convention, with respect to the prevention of pollution of the sea by garbage, is has not yet come into effect because of lack of notifications from MARPOL Parties whose coastlines border the Caribbean Sea on the existence of adequate reception facilities, pursuant to Regulations 38.6 of MARPOL Annex I and 5. (4) Of MARPOL Annex V. Similarly in the area of waste water management adequate waste water treatment facilities at the ports throughout the CSME Zone are non existent. To create a funding mechanism as well as an economic incentives for both the port authorities to provide waste reception facilities and for shipping operators to offload waste onshore, the the GIWA-Regional Assessment,[45] has recommended the issuing of the "cruise line seasonal passport"[46] (CCP).

In most Member States, more specialised solid and liquid waste management and disposal services are provided by the private sector. These are carried out mainly by small or medium-sized firms. The services include, *inter alia*, solid waste management and disposal services; water and sewerage treatment and disposal; recycling and E-waste management, waste water and waste oil removal and disposal services.

In addition, some Member States of the Caribbean Community have not invested in large scale sewage systems; such facilities are therefore non-existent in those countries, other than the facilities provided by private service providers. However, the proposed establishment of the Caribbean Revolving Fund for Wastewater Management (CReW), by of the IDB and UNEP should create an incentive for Member States of the Community to invest in waste water treatment and disposal systems. The long-term goal of the CReW is to reduce pollution discharges in the coastal waters of the Caribbean Basin through the removal of financial, technical and institutional barriers, in the framework of advancing towards the fulfilment of the obligations of the Cartagena Convention and its Protocols[47]. In this regard, the project will pilot revolving financial mechanisms that can subsequently be established as feasible instruments to provide sustainable financing for the implementation of environmentally sound and cost-effective wastewater management measures[48].

Notwithstanding the dominance of the public sector in these services, given the technological requirements of large infrastructural projects, most of the technical expertise to establish these facilities is recruited from abroad. In addition, a substantial amount of the resources for the construction of such facilities are usually source by way of loans from the international financial institutions.

Though not grouped in the Pollution Management Group, the water resources treatment and management is considered here because of its association with waste water treatment. Like in the case of both solid and liquid waste management, the public sector plays a very important and critical role in providing environmental services in this area. There is also an increasing role for the private sector with respect to the provision of services for the treatment of water for general distribution. This trend is likely to increase particularly in the water scarcity countries in the CSME Zone.

The increasing water scarcity in some Member States of the Community has created opportunities for the provision of water form desalination water. This is a growing trend which is likely to continue in the Community, as Member States grapple not only with the provision of adequate sources for domestic and industrial uses, by also for the increasing tourist population. The approach to the provision of

[43] IMO estimates that each tourist generates about 3.5 kilos of waste per day. Waste generation for cruise ships is usually calculated by bed days. See Ocean Conservancy (2002) Cruise Control: A Report on How Cruise Ships Affect the Marine Environment. The Ocean Conservancy 68.

[44] Ibid.

[45] Villasol, A. and J. Beltran. Global International Waters Assessment, Regional Assessment 4, Caribbean Islands, Bahamas, Cuba, Dominican Republic, Haiti, Jamaica, Puerto Rico. UNEP, GEF, KALMAR, CIMAB. Published by the University of Kalmar on behalf of UNEP, 2004

[46] This would be sold at the beginning of the season and would allow access to a number of installations and harbor hosted facilities, including treatment of their waste. This passport would allow the ports to receive income at the beginning of the season and therefore reduce the risk posed by the stability of international politics on the volume of tourists in the region-thus shifting the level of risk factor from the port authorities to cruise ship operators.

[47] See the GEF Project Document entitled Testing a Prototype Caribbean Regional Fund for Wastewater Management (CReW)

[48] Ibid.

desalination water varies from country. In the case of Antigua and Barbuda one desalination plant which is owned, operated and maintained by ENERSERVE (Veolia Water Company), a private sector entity, supplies approximately 60 to 75 percent of Antigua's drinking water[49]. In the case of Barbados the desalination plant is owned and operated by the Barbados Water Authority. The quality of the water resources in some Member States provide the basis for a water based industry, comprising of purified bottled water; the sale of water to cruise ships as well as the export of water, in the case of Dominica, as a commodity.

A key question which arises is if there is a need for a radical change in the ownership structure, particularly of private participation in environmental infrastructure services in the CSME Zone. This can be achieved by different means, including through full privatisation; the issuing of service contracts to perform specific tasks; build operate transfer (BOT) in which the facility is built and operated by the private sector for a specific period of time (i.e.10-20 years) to be able to recover the cost of the investment or built operate own (BOO) on the basis of a long term concession contract (i.e. 25 years) or joint venture arrangements.

Depending on the nature of the environmental infrastructural service in question, a case could be made for any of these management arrangements. However, the most controversial is likely to be full privatisation. The best example in the CSME Zone of the privatisation of an environmental infrastructural service is the privatisation of the water resources sector in Belize; an experience, which is classified as a failed water privatisation effort.

Information Knowledge/Capacity Enhancement Group

The provision of environmental services in this Group is provided by a number of actors, including, *inter alia*, by the public sector; non-state actors, in particular NGOs, Universities in particular to formal training and research and technical institutes and field stations. Some of the institutes and field stations are private facilities such as the Belize Foundation for Research and Environmental Education (BFREE) whose activities focus mainly on research, management and environmental education and outreach[50] or are run by Non-For Profit Organisations as in the case of the Blackbird-Oceanic Society Field Station in Belize. The Oceanic Society's primary mission is to protect endangered wildlife and preserve threatened marine habitats worldwide. The Society works to establish protected natural areas, supported and sustained through scientific research, in cooperation with local communities[51].

In Guyana, the Iworkama Rain Forest Programme provides a living laboratory for the study, research and application of sustainable tropical forests management principles. The Iworkama Rain Forest Programme established following an offer made by His Excellency Desmond Hoyte, President of Guyana, to the international community of one million acres of Guyana pristine rainforest to test and develop tools and methodologies for the management of tropical rainforests and spearheaded by the Commonwealth Secretariat.Formal professional training in environment is provided by the Community's Universities, whereas public education and training is provided, primarily by NGO and the public sector. There are however a number of private sector entities which specialised in environmental education.

Cleaner Technology and Production Group

The provision of environmental services in this Group is evolving in the CSME. The main effort to create greater awareness the activities taking place under the auspices of UNEP, as part of the global process—the Marrakech Process—aimed at the elaboration of a 10-Year Framework of Programme on sustainable consumption and production[52].The *First Sub-Regional Meeting on Sustainable Consumption and Production for the Caribbean and Latin America*[53] held in Trinidad and Tobago in August 2008, should provide further impetus to creating greater awareness among Member States of the Caribbean Community to undertake efforts to green their economies; enterprises to develop greener business models and encourage consumers to adopt more sustainable lifestyles.

49 US Army Corps of Engineers, Mobile District and Topographic Engineering Center, Water Resources Assessment of Dominica, Antigua, Barbuda, St. Kitts and Nevis, December 2004.

50 See www.freebelize.net

51 See www.oceansociety.org for more information.

52 This process is called for by the WSSD Johannesburg Plan of Action. Its goals are to: (a) assist countries in their efforts to green their economies; (b) help corporations develop greener business models and (c) encourage consumers to adopt more sustainable lifestyles.

53 For more specific information on the Workshop See The Report of the First Sub-Regional Meeting On Sustainable Consumption and Production For The Caribbean and Latin America, Trinidad and Tobago, 13-14 August 2008, UNEP/ROLAC.

Resource Management Group

In addition to potable water treatment and distribution, this Group includes renewable energy and a set of knowledge intensive services which are orientated towards the protection and enhancement of the environmental and natural resource base of the CSME Zone. In the case of renewable energy, environmental services are provided in support of the increasing use of clean energy products such as solar. This is being fuelled by the search for cheaper and green sources of energy.

Solar energy uses in the CSME Zone is expanding beyond solar water heaters to areas such as the provision of lighting for offshore oil platforms. In addition to solar, other forms of clean energy such are as hydro, geothermal and wind are available in the CSME Zone. In the case of hydro, Dominica produces about forty percent of its energy from hydro. In the case of geothermal, the commencement of production of geothermal energy in Nevis during 2008, will serve as an incentive for the region to seriously focus on developing its potential in this area.

Over the past decade and a half or so years, the provision of environmental and natural resources consultancy services has increase in importance. These services are usually provided by small and medium sized, highly specialized entities and professions. A number of factors may be attributed to this growth. Firstly, the increase interest which resulted from the convening of the United Nations Conference in Environment and Development (UNCED) in 1992 and the First United Nations Conference on the Sustainable Development of Small Island Developing States (SIDS) in April/May in 1994, created greater awareness of the importance of environment to national and regional development. The increase awareness has also been influence significantly by the work and activities of non-state actors, particularly the Non-Governmental Organisations, both at the national and regional levels.

The impact of the UNCED on the provision of environmental goods and services in the CSME Zone, is probably best illustrated by an innovated[54] private sector initiative— Liana Cane—in Guyana. Formed in 1994 to contribute the conservation of and the sustainable use of Guyana forest resources, value added environmental goods in the form of sustainable furniture and other household fittings are produced from renewable forest products.

These products are produced namely from liana, a woody forest vine that attaches themselves to the towering tree canopies while their roots and multiple offshoots drop down to the forest floor as well as form the kufu (*clausia spp*) and nibbi vines (*heteropsis flexusoa*). The latter is a small vine which grows from the forest floor up to the trunk of the trees and a fibre of the palm which is made by women into a twine called tibisiri (*mauritana flexusoa*). These raw materials are harvested in a sustainable manner to ensure their regeneration, with the participation of the indigenous peoples and local communities in the harvesting areas, thereby providing an economic incentive for them to sustainable utilise forest. This eco-innovation has the potential to form the basis of an industry based on NTFP in the Caribbean Community.

Secondly, the strengthening of the legal framework for environmental management in individual Member States has created a demand for environmental services. In Barbados the emphasis by the Government of Barbados on Coastal Zone Management and the securing of loans on the international financial market for this purpose has created a demand for coastal and marine environmental services. In Trinidad and Tobago the enactment of the Environmental Management Act which established the requirement for Environmental Impact Assessment (EIA) has created a demand for environmental services. A similar situation exists in Jamaica.

Also contributing to the creation of demand for the provision of environmental serves in the CSME Zone, is the support required by Member States to honour their obligations under the various Multilateral Environment Agreements (MEA) to which they are Party. Since the late 1980's the Member States of the Caribbean Community have signed and ratified a number of Multilateral Environment Agreement (MEA). The ratification of MEAs along with the technical assistance provided from multi- and bi-lateral sources have been contributing factors in creating the demand for the provision of environmental service. These have resulted in a net inflow of resources to the environmental sector, which in turn have contributed to creating a demand for the provision of environmental services. Table 3.1 gives an indication of this inflow. Between 1994 and January of 2009, approved GEF project grants for national projects in

[54] See Griffith. M. D. The Caribbean, Discover the Region, Its Assets and Investment Opportunities, Prepared for CaribInvest (West Indies) Ltd., CaribInvest (West Indies) Ltd., March 2007.

the Member States of the Caribbean Community stood at over 50m.

Table 3.1: Value of Approved GEF Project for the Member States of the Caribbean Community 1994-2009[55] in USD (millions)

Country	Approved National Projects	Participation In Approved Regional And Global Projects	Participation In Approved Regional Project Involving Member States Of CARICOM
Antigua and Barbuda	4.410, 000	70,330,000	
The Bahamas	1,183,000	50,881,000	
Barbados	929,000	70,591,000	
Belize	10,288,000	84,757,000	
Dominica	1,055,000	49,234,000	
Grenada	1,597,000	47,124,000	
Guyana	4,551,000	57,289,000	
Haiti	7,858,000	25,781,000	
Jamaica	4,601,000	59,540,000	
St. Kitts and Nevis	763,000	47,112,000	
St. Lucia	1,310,000	72,810,000	
St, Vincent and the Grenadines	998,000	43,407,000	
Suriname	10,640,000	35,602,000	
Trinidad and Tobago	1,078,000	55,052,000	
Total	**51,261,000**		**56,275,774**

A significant amount of the resources for national projects is related to the financing of enabling activities in support of the implementation of MEAs. The regional also benefited from their participation in regional and global GEF projects. Regional projects which were approved which involved Member States of the Caribbean Community exceeded 56m. The services relating to the implementation of these projects are provided both by consultants from third States as well as from the CSME Zone.

The industrial demand for environmental services also drives demand for the provision of those services in the CSME Zone. This is probably best illustrated by the growth for energy environmental service in Trinidad and Tobago, in light of the importance of its oil and gas industry.

The brief overview of the environmental service in the CSME Zone suggests that the environmental industry has considerable scope and potential. For that potential to be maximised, however, investment need to be made in the environment as well as the creation of an adequate enabling environment to facilitate its further growth.

[55] Compiled by the Author from the GEF Project Data Base at www.gefweb.org. Also see Annex 2 for a breakdown of the regional projects.
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4. CREATING AN ENABLING ENVIRONMENT

The creation of an enabling environment for the promotion of environmental services in the CSME Zone must be addressed within the context of the legal framework provided by the RT. Hence the institutional and legal arrangements and deficiencies at the Community level have an impact on the enabling environment which is created for the promotion of environmental services in the CSME Zone. In addition, issues such as financing an investment in the environment, including banking procedures; procurement procedures; access to environmental sound technologies and know-how and the greater use of economic instruments are important elements of the tool kit required to create an enabling environment for the expansion of the environmental industry in the CSME Zone.

The Legal and Institutional Framework

Historically, the consideration of the "environment" within the policy sphere of the Caribbean Community has been, when compared to the more mainstream areas of trade and economics; peripheral, at the best[56]. This in itself is a constraining factor to the promotion of trade in environmental goods and services in the Caribbean Community. The signing of the Revised Treaty by most of the Member States of the Caribbean Community and its incorporation into domestic legislation provides a new legal framework for the consideration of environmental, natural resources management and sustainable development issues in the Caribbean Community, which if implemented can have a significant impact on the growth of the environmental industry in the CSME Zone.

This along with the establishment of the Caribbean Court of Justice (CCJ), which pursuant to Article 211.RT have compulsory and exclusive jurisdiction to hear and determine disputes arising from the RT, constitutes a "new legal order" in international law[57]. It is within this "new legal order" that the development of the service sector, pursuant to Article 54.RT, must be considered. In so doing, cognizance must be taken that in the exercise of its original jurisdiction, the CCJ is mandated by Article XVII of the Agreement Establishing the Court ("the Agreement") and Article 217.RT to apply such rules of international law as may be applicable. This requires an expertise ……. that is entirely different from that to which one is accustomed in municipal law proceedings[58].

Also of significance is the consideration of the Community freedoms—free movement of goods, the free movement of skilled Community nations, the right of establishment and the freedom to provide and receive services and the free movement of capital—guarantee by the RT. The exercise of these freedoms as well as the rights contingent are of great significance to the further expansion of trade in services, including the environmental service sector, in the CSME Zone. Of particular relevance are the right of establishment and the right to provide and receive services. In the exercise of these freedoms, however, it is necessary to distinguish between them. Guidance in this regard, is provided by the ECJ in *Gerhard*[59]. Member States must therefore ensure that all the administrative procedures are in place in order to facilitate the exercise of the Community freedoms, guarantee by the RT.

The environmental and natural resources provisions of the RT are underpin by a number of fundamental principles of environmental law. These include, *inter alia*, the principles of sustainability and environmental protection; the precautionary principle; the polluters pay principle; the principle of prevention; the source principle; the principle of cooperation and the protection of the rights of indigenous peoples as issues well as the general principle of non-discrimination[60]. The application of these principles of environmental law to guide the behaviour of persons, both natural and juridical operating in CSME Zone, will contributed to creating an enabling legal framework for the expansion of trade in goods and services within the CSME Zone.

The constitution of a "new legal order" in international law, in itself, is not enough, but needs to be accompanied with the appropriate legal tools and

[56] Griffith, M. D. and D. Oderson, Strengthening the Inner Circle for Environment and Development: The Case of the Caribbean Community. Prepared for CaribInvest (West Indies) Ltd. CaribInvest (West Indies) Ltd., February 2009.

[57] A new legal order is recognised in international law as a treaty between sovereign status but also takes effect within the domestic legal systems of Member Status. The order is characterised by the concepts supremacy of the Community law over national law and direct effect.

[58] Trinidad Cement Limited and TCL Guyana Incorporated v. The Co-operative Republic of Guyana, Interim Order, CCJ Application No. AR 1 of 2008, [2008] CCJ 1 (OJ**)**

[59] Case C-55/94, Gebhard v Consiglio dell'Ordine deglic Avvocati e Procuratori di Milano {1995} ERC I-4165.

[60] Ibid.

institutional mechanisms, with supra-national characteristics, in Caribbean Community Law, to give full effect to the provisions of the RT. More importantly, the provisions of the RT must be safeguard against infringement. This requires the establishment of a mechanism to be the guardian of the RT, to ensure the proper application of Caribbean Community Law and to take action against any infringement. The EC Treaty, unlike the RT, makes provision from such a mechanism in the form of a European Union Commission. Article 226.EC provides that

> If the Commission considers that a Member State has failed to fulfil its obligation under the Treaty, it shall delivered a reasoned opinion on the matter after giving the State concerned the opportunity to submit its observations.
>
> If the state concerned does not comply with the opinion within the period laid down by the Commission, the latter may bring the matter before the Court.

No such mechanism exist in the Caribbean Community, though it is clear that the effective and efficient functioning of the CSME requires the establishment of a mechanism similar to what obtains in the EU—a Caribbean Community Commission. Like in the EU jurisdiction such a mechanism should have legislative, administrative, executive and judicial powers and be supra-national in character[61], be independent and selected on the basis of competence, expertise and experience. Central to the establishment of a Caribbean Community Commission, should be a designation of a Commissioner of Environment and Sustainable Development whose main task is to facilitate the effective coordination of the environment and sustainable development in the Caribbean Community, as a means of furthering and deepening the process of integration among the Member States of the Community[62].

From a legislative standpoint, it inconceivable to understand how many of the provisions of the RT, including those on environment and natural resources management, will be given practical legal effect in Member States without clear legal means—such as regulations, directives and decisions—for the making of secondary Caribbean Community Law. The absence of such means remains a major deficiency in the governance structure of the Caribbean Community, and impacts on the Community's ability to honour many of the provisions contained in the RT. The need therefore exists, for means by which Secondary Community Law could be enacted with the efficiency required. It is through the enactment of secondary legislation which must be incorporated into domestic law that the implementation of the Community policies, including the environmental and natural resources management policy can be uniformly applied throughout the CSME Zone.

A case can be made, like as obtained in the EC jurisdiction, for the use of secondary Community Law—by way of regulations, directives and decisions—as may be necessary for facilitating the Community's environmental and sustainable objectives. All of these means are binding and should be likewise in the Caribbean Community, if implemented. In the case of a regulation is should be binding in its entirety and directly applicable in all Member States; a directive shall be binding, as to the result to be achieved, upon each Member State to which it is addressed, but shall leave to the national authorities the choice of form and methods and a decision shall be binding in its entirety upon those whom it is addressed[63].

The establishment of a Caribbean Community Commission and formal legal means for translating Community decisions into Caribbean Community Law is consistent with the spirit of Article 54.2. (c).RT, which mandates the establishment of the appropriate legal framework to support the service sector in the Community. These institutional modalities are a *sine qua non* for the effective functioning of the CSME, and by extension, trade in services.

In addition to the RT, another legally binding instrument—the Economic Partnership Agreement Between CARIFORUM Member and the European Community and its Member States—has long term implications for the shaping of environment and sustainable development policies in the Caribbean Community[64], and by extension the environmental service sector. It is even considered by some to provide an alternative framework to the CSME for individual country's future development[65]. In addition, the EPA provides a model for future economic and trade agreements between CARICOM Member States and

[61] For a more detailed discussion on this issue and the principles which should guide the establishment of the CARICOM Commission see Griffith, M. D. and D. Oderson, Strengthening the Inner Circle for Environment and Development: The Case of the Caribbean Community.Prepared for CaribInvest (West Indies) Ltd. CaribInvest (West Indies) Ltd., February 2009.

[62] Ibid.

[63] See Article 249.EC

[64] Ibid.

[65] Stabroek News, CARICOM Integration and CARICOM Sovereignty, Wednesday, March 26, 2008. The article makes reference to the view expressed by Mr. Seaga, a former Prime Minister of Jamaica, that the EPA was a now much preferred alternative to the CSME as a future facilitator of Jamaica s economic development.

third countries or group of countries[66]. First and foremost, the CARIFORUN/EU EPA is a Trade Agreement for Sustainable Development and the Parties have agreed that "...the objective of sustainable development is to be **applied and integrated at all levels of their economic partnership**…….. [The Parties] **understand** this objective to **apply** in the case of the Economic Partnership Agreement as a **commitment**…."[67] [Emphasis added].

The legally binding commitment to the objectives of sustainable development in the EPA, if taken seriously by the Caribbean Community and its Member States, provides an enabling environment, which if supported by the right policy options, could stimulate further demand for the provision of environmental services. As an example, the provisions in the EPA on the maintenance of environmental standards, which are also applicable to investors, mandate the Parties to take, within their own respective territories, such measures as may be necessary to ensure **through national legislation of general application**, pursuant to Title II.Chapter 2.Article.3 and 4 that

3. Investors do not manage or operate their investments in a manner that circumvents international environmental or labour obligations arising from agreements to which the EC Party and the Signatory CARIFORUM States are parties**.**

4. Investors establish and maintain, where appropriate, local community liaison processes, especially in projects involving extensive natural resource-based activities, in so far that they do not nullify or impair the benefits accruing to the other Party under the terms of a specific commitment.

The provisions of the EPA with respect to eco-innovation[68] the Parties agree to cooperate, including by facilitating support, in projects related to environmentally-friendly products, technologies, production processes, services, management and business methods, including those related to appropriate water-saving and Clean Development Mechanism applications, among others, contributes to the creation an enabling environment for the expansion of environmental goods and services in the CSME Zone.

Financing and Investment in the Environment

Investment in the environmental and natural resource base of the Caribbean Community and its Member States is an investment in securing the Region's social and economic viability and enhancing its competitiveness. Investment in the Region's environmental and natural resources also creates demand for the provision of environmental services within the CSME Zone. The Caribbean Community, itself, has a key role to play in this regard, in ensuring that the adequate legal and institution structures are in place and the necessary resources are available to stimulate the implementation of the policy options which are necessary.

To be able to do this, without being constrained by the availability of resources, the Community needs to have an independent source of resources, derived through automatic resource transfers from Member States. This is referred to the "Community Own Resources", from which catalytic, "core" resources should be provided for the funding the implementation of the Community Environmental and Natural Resources Management Policy Framework.

To supplement the resources obtained directly from the "Community's Own Resources", other financial instruments could be established with the assistance of the international community. In this regard, the Community could build on existing concepts. One such financial modality is the Regional Sustainability Fund for Caribbean SIDS agreed to by the Forum of Ministers of Environment for Latin America and the Caribbean[69], in November 2004, acting on the recommendation of the Caribbean SIDS Regional Meeting for the Preparation of the Comprehensive Review of the BPOA convened in Trinidad and Tobago in October of that year. To establish practicability of establishing such a Fund, a feasibility study has been prepared and the operation modalities for its establishment outlined[70]. Furthermore it has been suggested that the concept of the Regional Sustainability Fund be expanded with specific widows to accommodate the various fund initiatives (i.e. a Sustainable Tourism Development Fund[71]; Your

[66] Griffith, M. D. and D. Oderson, Strengthening the Inner Circle for Environment and Development: The Case of the Caribbean Community. Prepared for CaribInvest (West Indies) Ltd. CaribInvest (West Indies) Ltd., February 2009.

[67] Article 3.Part 1.EPA

[68] Title IV, Chapter 2, Section 1, Article 8**.**

[69] See Decision 4 of the Fourteen Meeting of the Ministers of Environment for Latin America and the Caribbean held in Panama, November, 2003.

[70] On the basis of the discussions which took place at the "*Technical Session on Innovative Financial Modalities for Sustainable Development in Caribbean SIDS: towards the Establishment of the Regional Sustainability Fund"***,** held in Trinidad and Tobago on 6-8 April 2004and the recommendations contained in the consultants' report entitled "*Towards the Establishment of the Regional Sustainability Fund for Caribbean SIDS***"** the structure for the establishment of the Regional Sustainability Fund has been proposed.

[71] The Conference of the Heads of Government of the Caribbean Community at its Twenty-Fourth Meeting held in Jamaica, 2-5 July

Change for a Better Environment Project[72] as a means of raising resources for the implementation of community environmental and natural resource based actions), which have been proposed for establishment in the region[73].

Opportunities for the expansion of trade in environmental goods and service exist in the region, but require targeted investment. Griffith[74] identified a number of areas including, *inter alia*, the production of furniture and other products from Non-Timber Forest Products; an industry has a huge potential, not only to generate an export industry, but also to transform local communities who depend on forest resources for their survival; the commercialisation of the Barbados Water Heating System as well as the greater utilisation of the potential of the region's biodiversity assets. These are all areas which have export potential and could benefit from public-private partnerships (PPP), in order to facilitate their further growth and expansion.

In order to exploit the opportunities highlighted, it is necessary for modalities to be available which provide access to financing for the development of eco-innovation initiatives, which might otherwise not be available. In this regard, the establishment of an Environment and Sustainable Investment Facility (ESDIF) by the Community[75] has been suggested. The purpose of such a Facility would be to facilitate access to financial resources, specifically to invest in projects aimed at the sustainable utilisation of environmental resources, where currently resources are limited. A special pool of resources from the Regional Development Fund established pursuant to the CARIFORUM/EU EPA could be allocated specifically for the establishment of this Facility[76].

Mainstreaming Sustainable Practices in the Financial Sector

The responsibility for creating an enabling environment for the further expansion of the environmental service sector not only lies with officialdom, but also with the private sector, particularly the financial sector. A critical requirement, in this regard, is the mainstreaming of sustainability practices in the financial sector.

To overcome the barriers to the integration of sustainability practices in the financial sector *The Workshop: Evaluation and Management of Environmental and Social Risks in Lending and Investment Practices*[77] held in Barbados in November 2008, have made a number of recommendations which could be implemented by the banks; banking associations and regulators. In the case of the banks the increase training of staff in areas such as sustainable finance, including mandatory training for credit officers and the risks and returns of sustainable business are highlighted. In addition, the banks should incorporate environmental best practices in risk management and establish environmental risk assessment units as part of their operations.

At the sector level, emphasis should be placed on fostering closer cooperation between banks, the adoption of common standards and the facilitation of the cross-fertilization between countries' experiences. In the case of regulator, the development and strengthening of partnership between Central Bank and financial institutions were emphasized as well as the provide incentives for environmental audits and the incorporation of environment indicators as part of their risk assessment operations. The overall objective is to mainstream sustainable practices into the banks' lending operations, thus making the borrower more sensitive to proper environmental stewardship.

Incentives

The enabling environment for trade in services could be improved significantly with the integration of environmental management in macro-economic and sectoral economic policy, as well as making public

2003, Montego Bay, Jamaica reaffirm the need to establish the Sustainable Development Fund.

[72] The rationale is to encourage persons, particularly, visitors to the region who have used the region's environmental resources (i.e. beaches, water, sea etc.) for their own benefit and enjoyment to contribute "change" (as in money) to contribute to the management of the region's resource base. To facilitate the implementation of this project, custom made receptacles will be placed at the main ports of entry/exit throughout the Community. The CNIRD/PISLM Secretariat may be contacted for further information by visiting www.cnirdpislm.org

[73] For a more in-depth discussion see Griffith, M. D. and D. Oderson, Strengthening the Inner Circle for Environment and Development: The Case of the Caribbean Community.

[74] For a more detailed overview of some of these opportunities see Griffith. M.D., The Caribbean, Discover the Region, Its Assets and Investment Opportunities, Prepared for CaribInvest (West Indies) Ltd., CaribInvest (West Indies) Ltd., March 2007.

[75] Griffith, M. D. and D. Oderson, Strengthening the Inner Circle for Environment and Development: The Case of the Caribbean Community. Prepared for CaribInvest (West Indies) Ltd., CaribInvest (West Indies) Ltd., February 2009.

[76] Ibid.

[77] See Workshop Conclusions on the Immediate Needs of the Caribbean Financial Sector in Terms of Sustainability, The Conclusion of the Training Workshop: Evaluation and Management of Environmental and Social Risks in Lending and Investment Practice, 24 November 2008, The Hilton Barbados, at http://www.unepfi.org/fileadmin/events/2008/barbados/barbados_conclusions.pd

expenditure more environmentally sensitive[78]. In this regard, the internalisation of environmental damage becomes a fundamental challenge. For this to be achieved fiscal policy must increasingly incorporate the "polluter's pays" principle and greater emphasis placed on *how* to implement environmental policy[79]. This would entail widening the scope of environmental policy instruments available by introducing a range of economic instruments-environmental taxes, refundable deposits, and the introduction of property rights, thus making environmental management more flexible, efficient and cost-effective[80]. This requires institutional change which involves closer linkages between environment Ministries and those dealing with finance, trade and economic planning.

The use of economic instruments to stimulate the market penetration of environmental goods and services in the CSME is probably best illustrated by the Barbados experience with respect to the solar water heating market in Barbados. Fiscal incentives were initially used to help stimulate the demand for solar water heaters. From an installation capacity of approximately 12 units in 1974 when the incentives were first introduced; there are approximately 35,000 solar water heating units installed on the island, over 25,000 systems on homes and the remainder on hotels and other tourist accommodations[81].

Fiscal incentives were first introduced through the Fiscal Incentive Act, 1974, which exempted solar water heating raw materials (e.g., tanks, collectors) from the 20 percent import duty. This result in lowered the installed cost of a unit by 5 to 10 percent. This along with the imposition of a 30 percent consumption tax on conventional electric water heaters played a key role in stimulating demand for solar water heaters in Barbados[82]. The Income Tax Amendment in 1980 through to June 1992, when it was suspended as part of IMF structural reforms, which allowed the deduction of the full-cost of a solar water heating installation. The deduction was reinstatement in 1996 and remains in place as of May 2008, as part of a personal home improvement allowance deduction of up to BD$3,500 per year for mortgage interest, repairs, renovations, energy or water saving devices, solar water heaters, and water storage tanks

Another approach adopted in the CSME Zone, to support environmental or natural resources management, is exemplified by the establishment of the Green Fund in Trinidad and Tobago, by the Finance Act 2000 and the Belize Protected Areas Conservation Trust (PACT), respectively. In the case of the former, a 0.1 percent tax—the Green Fund Levy—is imposed on the gross sales or receipts of all companies conducting business in Trinidad and Tobago; the proceeds of which, enables grants to be made to community groups and organisations engaged in activities to remediate, reforest, and conserve the environment. Similarly in Belize, the Belize Protected Areas Conservation Trust (PACT), created in 1996, derives its resources from conservation taxes paid by foreign tourists upon departure, protected area entry fees, and taxes paid by cruise ships visiting Belize.

The establishment of a regime for incentives; pursuant to Article 54.2.(b).RT, for the development of the service sector in the Caribbean Community is also relevant to trade in environmental services. In devising such a regime for the environmental service sector, due consideration should be given to incentives which are geared to mainstreaming sustainability into the financial sector. In this regard, the banks could give consideration to the creation of loan pricing mechanisms to encourage environmentally friendly practices.

Procurement Procedures

The drive towards the achievement of the objective the "full integration of the national markets of Member States of the Community into a single, unified and open market area", pursuant to Article 78.2.(a).RT should be accompanied by procurement procedures, particularly at the Community level which encourages horizontal integration of firms across the CSME Zone. This should however be done taking into consideration the obligations of Member States contained in legal instruments to which they are Party.

Human Resources

The Region has gaps in its human resources capability in environmental services. These gaps occur both at the policy and technical levels. Notwithstanding this, recent years have witnessed an increase number of Community nationals who gained professional training in environmental and natural resources. The increase

[78] Griffith, M. D. and D. Oderson, Strengthening the Inner Circle for Environment and Development: The Case of the Caribbean Community. Prepared for CaribInvest (West Indies) Ltd. CaribInvest (West Indies) Ltd., February 2009.
[79] Griffith, M. D. and B. Persaud, Introduction to Economic Policy and the Environment, in Griffith, M. D. and B. Persaud (Ed :), Economic Policy and the Environment: The Caribbean Experience, Centre for Environment and Development, University of the West Indies, 1995.
[80] Ibid.
[81] Perlack, B and W. William Hinds, Evaluation of the Barbados Solar Water Heating Experience, September 2003.
[82] Ibid.

availability of such expertise has provided a basis for the provision of trade in environmental services. In order to protect and ensure the quality and integrity of the environmental profession and to build capacity to serve the region, a number of institutions have been formed, notably the Jamaica Institute of Environmental Professional and the Barbados Association of Environmental Professionals. These Associations have an important role to play in protecting the integrity of the environment profession in the CSME Zone, including the standardisation of the professional qualifications required for persons to practice as environmental professional in the CSME Zone.

Given the projected growth for environmental services will be in developing countries, a critical issue which arises in the planning for the Community human resources capability, is whether the region can provide such services internationally. This will depend to a large extent on the ability of the Region's providers of environmental service to organise themselves in such a manner as to be internationally competitive. In this regard, consideration needs to be given to the horizontal integration of the environmental services skills within the CSME Zone as a means of competing globally. This will require a firm or groups of firms to bring their expertise together to undertake complete projects. This approach however, brings into focus, the role of the Caribbean Investment Fund and the extent to which it is geared towards supporting such an initiative.

In exploring this option, consideration should also be given to modalities which have already been agreed to by the international community. In this regard, due consideration should be given to the original concept of the Small Island Developing States Technical Assistant Programme[83] (SIDS/TAP), which is an integral part of the implementation strategy of Programme of Action for the Sustainable Development of SIDS, Originally conceptualised to facilitate inter- and intra-regional cooperation on sustainable development between SIDS, this modality could be reconfigured and used as a platform for expanding trade in services between SIDS, including environmental services.

To facilitate this and to provide Community nationals with the opportunities to trade their services, the Community and its Member States should establish a Caribbean Community Technical Assistance Programme, support by a Caribbean Community Trust Fund[84] (CCTF). The core resources for the capitalisation of the CCTF should be provided from the "Community Own Resources". The purpose of these mechanisms is to enable the Caribbean Community to provide technical assistance not only to its Member States, but also to other countries, particularly SIDS and other developing countries.

The creation of a conducive enabling environment for the expansion of the environmental industry in the CSME Zone is critical, if the Region is to maximise any opportunities which might exist. Of importance as well is the need for mechanisms and modalities that foster a Community approach to the development of the industry.

[83] See paragraph 106 of the United Nations General Assembly, Report of the Global Conference on the Sustainable development of Small Island Developing States, Bridgetown, Barbados, 25April-6 may 1994, A/CONF.167/9, October 1994.

[84] For a more in-depth discussion on these modalities See Griffith, M. D. and D. Oderson, Strengthening the Inner Circle for Environment and Development: The Case of the Caribbean Community. Prepared for CaribInvest (West Indies) Ltd., CaribInvest (West Indies) Ltd., February, 2009.

5. ANALYSIS OF PRESENT AND FUTURE OPPROTUNITIES INCLUDING POTENTIAL FACTORS WHICH ARE LIKELY TO CONTRIBUTE TO THE GROWTH OF ENVIRONMENTAL SERVICES IN THE CSME ZONE

The Environmental Industry

In 2003, the total size of the global environmental market is estimated at $550 billion[85]. This is expected to grow to US$ 640 billion in 2010 with an annual growth rate of 8 percent; thereby placing the environment industry at roughly the same size as the pharmaceuticals or information technologies industries[86]. The potential of trade in environmental services cannot therefore be ignore by developing countries, irrespective of their size. Environmental services, as distinct from the equipment or resources market, account for about 50 per cent of the total market: solid waste management accounts for 22.6 percent, water treatment services for 14.3 per cent, consulting and engineering for 5.9 percent, and remediation and industrial services, 3.3 percent[87].

The share of the global environmental market is highly skewed in favour of the developed world. In 2001, the United States, Japan and Western Europe accounted for 85 per cent of revenue generation in from the sector[88]. In the developed countries where the market is more "mature" annual growth was 1.6 per cent in 2000 and 2001 and in developing countries 7 to 8 per cent[89]. Environmental infrastructure services (water, wastewater, solid waste) constitute 62 per cent of the global market.

Most of the future growth in environmental services is, however expected to be in the developing world. It is estimate that developing and emerging markets will have 15 per cent market share of the environmental industry in the 21st century compares with an estimate of less than 10 per cent in 1995[90]. Over the decade to 2010, the United Kingdom's Joint Environmental Markets Unit predicts that developing and transition countries will expand their environmental business by 10 percent a year, producing a market of US$ 178 billion, compared with a 3 to 5 percent growth in developed economies, which will still hold the lion's share of the market (perhaps US$ 773 billion)[91]. With the increasing emphasis being placed globally on the establishment of green economies, as well as the need to address the many environmental and natural resources issues, particularly in the developing world as well as action aimed at fulfilling the Millennium Development Goals (MDGs) will drive the demand for environmental goods and services.

Potential Factors which are likely to contribute to the Growth of Environmental Services in the CSME Zone

There is general consensus of the "win-win" dimensions of the liberalisation of the environmental services and its inter-relationship with environmental protection, human health and sustainable development. Increase liberalisation in environmental goods and services should result in increase access to environmental technologies by the developing world by facilitating investment and transfers of environmental technologies and knowledge; the gains which results from increase health and environmental performance, of both the global and local environment.

However as highlighted by Cuba[92], the process of liberalisation does not automatically enhance the

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[85] United Nations Conference on Trade and Development, Report of The Expert Meeting On Definitions And Dimensions Of Environmental Goods And Services In Trade And Development, TRADE AND DEVELOPMENT BOARD Commission on Trade in Goods and Services, and Commodities, Expert Meeting on Definitions and Dimensions of Environmental Goods and Services in Trade and Development Geneva, 9–11 July 2003 held at the Palais des Nations, Geneva, from 9 to 11 July 2003. TD/B/COM.1/59, D/B/COM.1/EM.21/3, 27 August 2003.

[86] Ibid.

[87] International Trade Centre, The Environmental Services Business: Big and Growing, International Trade Forum-Issue 2/2001, http://www.tradeforum.org/news/fullstory.php/aid/268/The_Environmental_Services_Business:_Big_and_Growing.html

[88] United Nations Conference on Trade and Development, Report of The Expert Meeting On Definitions And Dimensions Of Environmental Goods And Services In Trade And Development, TRADE AND DEVELOPMENT BOARD Commission on Trade in Goods and Services, and Commodities, Expert Meeting on Definitions and Dimensions of Environmental Goods and Services in Trade and Development Geneva, 9–11 July 2003 held at the Palais des Nations, Geneva, from 9 to 11 July 2003. TD/B/COM.1/59, D/B/COM.1/EM.21/3, 27 August 2003.

[89] Ibid.

[90] International Trade Centre, The Environmental Services Business: Big and Growing, International Trade Forum-Issue 2/2001, http://www.tradeforum.org/news/fullstory.php/aid/268/The_Environmental_Services_Business:_Big_and_Growing.html

[91] Ibid.

[92] WTO, Environmental Services, Communications from Cuba, Council for Trade in Services, S/CSS/W/142, 22 March 2002, (02-1498).

competitiveness of the developing countries. Indeed, their domestic capacity has to be strengthened with a view to achieving the efficiency they need to face up to competition from the trans-national corporations with access to their markets; hence the need for the negotiations to take Members' different levels of development into account and facilitate progressive liberalisation. Cuba[93] further contends that trade liberalisation in environmental services will only be able to strengthen domestic service suppliers if differential treatment is applied, with the view of eliminating the technological gap between developed and developing countries.

The growth in environmental goods and services in the CSME Zone is likely to expand in the future. A number of factors, in addition to some of those highlighted before, are likely to contribute to driving the potential growth of trade in environmental services in the CSME Zone. These are summarised as follow:

Establishment of regional and national institutional regulatory frameworks for environmental and natural resources management and the integration of environmental planning in national economic and sectoral planning: A critical and strategic requirement which could drive the expansion of the environmental industry in the CSME Zone is the appropriate legal and institutional framework particularly at the regional level. A major objective, in this regard, would be to elevate the importance of environment and natural resources management as one of the fundamental objectives of the single, unified and open market area envision by Article 78.2. (a).RT. These changes would however need to be made within the overall legal and institutional requirements highlighted in the foregoing for the full and effective implementation of the CSME.

Fundamental to this is the full application and interpretation of the RT including its environmental and natural resources provisions as well as the jurisprudence of CCJ:. The CCJ, pursuant to Article 211.RT, have compulsory and exclusive jurisdiction to hear and determine disputes concerning to the interpretation and application of the RT. This includes the environmental and natural resources provisions of the RT. Furthermore, pursuant to Article 215.RT The member States, Organs, Bodies of the Community, entities and persons to whom a judgment of the CCJ applies, shall comply with the judgment promptly. The adjudication by the CCJ, when this occurs will shape the Community and its Member States approach to environment and natural resources issues, for the better. This in turn will contribute to providing an enabling environment for the expansion of environmental goods and services in the CSME Zone.

The increasing trend globally of transforming economies into green economies, and the embracement of this philosophy in the CSME Zone: It will be inescapable for the Caribbean Community and its Member States to avoid this trend. The effort by Dominica to transform the island into an environmentally sound organic island is evidence of this trend. A critical dimension of the development of green economies in the CSME Zone is the generation of energy from renewable sources such as, *inter alia*, solar, wind and geothermal; resources with which the region is blessed. These sources will become more important as part of the energy mix of the Member States of the CSME Zone.

The increasing demand for the protection of the region natural and cultural resources on which the Region's tourism depends: The increasing emphasis being placed on the development of the Region's natural and cultural assets in support of the tourism industry makes it imperative that investment must be made in protecting and enhancing these resources. Furthermore, Article 55.RT mandates the Community to formulate proposals for sustainable tourism development, recognising both, the importance of tourism to the Region's economic development and the need to conserve its cultural and natural resources and to maintain a balance between a healthy ecology and economic development. A more environmentally sensitive approach to tourism development in the CSME Zone will not only contribute to enhancing the competitiveness of the Region's tourism product but would also serve as a driver for the further expansion of the Region's environmental services sector.

The development of the next frontier of Caribbean development—the sustainable management and utilisation of the resources within and under the Caribbean Sea: The Caribbean Sea is an important resource and ecosystem to the Caribbean Community and its Member States as it supports a number of important sectors, including inter alia, fisheries, marine transport and in particular cruise tourism; marine recreational activities which support the Region's tourism industry as well as the living and non-living resources contained therein and under the sea. A robust regional programme aimed at the sustainable management and utilisation of the resources within and under the Caribbean Sea should create opportunities for the provision of environmental services.

[93] Ibid.

Furthermore, an integrated Plan for the Caribbean Sea must of necessity also include the formulation of a marine environment protection strategy[94]. Such a strategy should include, pursuant to Article 140.1. (c), and 3.RT, the protection of the marine environment from the effects of vessel source pollution and in combating the effects of oil spills; co-operation among Member States in the implementation of relevant maritime instruments relating to maritime safety, marine environmental protection, marine accident investigation and the facilitation of marine traffic[95]. It should also address, pursuant to Articles 60.3. (d) and 141.RT, safeguarding the marine environment from pollutants and hazardous waste[96].

The increasing appreciation of the economic value of the Region's biodiversity resources and traditional knowledge, particularly of the Region's indigenous peoples: The region's has considerable biological resources, both terrestrial and marine. A greater appreciation of it potential economic value could stimulate greater interest on the part of the Community in developing these assets. This will require investing not only in research but in the legal protection of these valuable resources.

The binding commitments contained in trade and economic of which the Caribbean Community and its Member States are Party: A major feature of trade agreements is the commitment to raising environmental, health and safety standards, including standards and technical regulations and sanitary and phytosanitary measures. These agreements will drive change with respect to the importance placed by persons, both natural and juridical on the environment and natural resource base of the Community. This is exemplified by the CARIFORUM/EU EPA, which is a Trade Agreement for Sustainable Development. Furthermore, the Parties have agreed that "...the objective of sustainable development is to be **applied and integrated at all levels of their economic partnership**…….. [The Parties] **understand** this objective to **apply** in the case of the Economic Partnership Agreement as a **commitment.** Since the CARIFORUM/EU EPA will be used as a standard, as the Community and its Member States negotiates other trade agreements;

Adherence to international environmental, health and safety standards, including sanitary and phytosanitary measures: The increasing importance of environmental, health and quality and product standards and assurance schemes, which could serve as non-tariff barriers to market access, makes it imperative for producers and service providers from the Caribbean Community and its Member States to develop the technical capacity and capability to comply with such standards. The requirement this imposes on the Caribbean producers and service providers creates opportunities for the provision of environmental services in this area. To facilitate a more structured approach to the adoption of and compliance with environmental standard in the Caribbean Community, pursuant to Articles 67(3) (d).RT and 74.2. (c), (d) and (e).RT, the Caribbean Environmental Health Institute (CEHI) should be re-focused and re-structured to play the lead role in this area[97]. To effectively discharge this mandate, the CEHI should be restructured and transformed into the Caribbean Community Environmental Standards Institute (CCESI)[98]. This is consistent with Article 67(4) (c).RT which makes provision for the facilitation of standards infrastructure development.

These are some of the factors which are likely to influence the growth of the environmental industry in the CSME Zone. However, the Member States of the CSME Zone will be unable to maximise the potential which exists, if greater importance is not given to environment industry and the necessary investment made and legal and institutional arrangements put in place to facilitate the growth of the industry.

[94] Griffith, M.D. and D. Oderson, Strengthening of the Inner Circle for Environment and Sustainable Development: The Case of the Caribbean Community. Prepared for CaribInvest (West Indies) Limited, CaribInvest (West Indies) Limited, February 2009.
[95] Ibid.
[96] Ibid.
[97] Ibid
[98] Ibid.

6. RECOMMENDATIONS WITH RESPECT TO POLICY ACTIONS, DATA GAPS AND LEGISLATIVE CHANGES

A starting point for the further promotion of the development of the environmental services sector in the CSME Zone is a clear demonstration at policy level at both the national and regional levels of a commitment to the integration of environmental and sustainable development practices into the economic and social planning. This must be done in a tangible manner, including, *inter alia*, the establishment of the necessary legislative frameworks; appropriate institutional mechanisms; the allocation of adequate financial resources and the integration of environmental and sustainable development principles into economic and sectoral planning. At the Caribbean Community level, the initiative of formulating an Environmental and Resources Policy Framework is a start. However, this policy framework should be placed within the wider framework of a Caribbean Community Sustainable Development Strategy. This implies a paradigm shift to more CSME Zone planning; an exercise that requires the clear definition of common spaces—economic, social, environmental, security—as well as the operation of supra-national institutions and arrangements.

A number of specific recommendations arise from the foregoing analyses which could form the basis for the elements on environmental services to be included in the Strategic Plan for Services in the CSME. These are summarised as follows:

International Level

- More visibility of the Community and its Member States in articulating the Region's views on trade in environmental goods and services in the WTO.

Classification of Environmental Services

- Consistent statistical definitions and classification on what constitutes environmental services in the CSME Zone is necessary. The definitions and classifications should be extended to include environmental goods. Establishing consistent definitions and classifications of the environmental services sector is critical step, in order to facilitate the identification of the appropriate policy options to facilitate the expansion of the sector in the CSME Zone and beyond.
- More in-depth research is required on the environmental goods and services sectors in the CSME Zone and their contribution to of the social and economic development of the region. In this regard, resources should be sought to undertake a comprehensive analysis of environmental goods and services sector in the CSME Zone.

Creating an Enabling Environment

(a) Regional Legislative Measures

- Consideration of trade in services within the CSME Zone cannot be considered in isolation of the wider legal and institutional arrangements which exist in the Caribbean Community. Trade in services is an integral part of the production integration framework of the Caribbean Community and an essential dimension of the *Economy* in CSME. . The existing constraints that are imposed as a direct result of the incomplete legal and institutional arrangements minimise the dividend which could result form .the full integration of the national markets of Member States of the Community into a single, unified and open market area, an instead become barriers. Hence the following recommendations:
    - The effective and efficient functioning of the CSME requires the establishment of a mechanism to perform the role of the guardian of the RT. This could take the form of a Caribbean Community Commission which should have legislative, administrative, executive and judicial powers and be supra-national in character.
    - A Commissioner of Environment and Sustainable Development should be designated as part of the Caribbean Community Commission structure. The main task is to facilitate the effective coordination of the environment and sustainable development issues in the Caribbean Community.
    - The Community need to establish clear legal means in the form of—

regulations, directives and decisions—for translating Community decisions into Community Law. These legal means should be binding. In the case of a regulation it should be binding in its entirety and directly applicable in all Member States; a directive shall be binding, as to the result to be achieved, upon each member state to which it is addressed, but shall leave to the national authorities the choice of form and methods and a decision shall be binding in its entirety upon those whom it is addressed.

- Adequate resources should be allocated through the CARIFORUM/EU EPA to enable the Member States of the Caribbean Community to make the transition to sustainable development, therefore giving practical meaning the commitment to the objective of sustainable development agreed to in this instrument and which is to be applied and integrated at all levels of their economic partnership.

(b) Financing and Investing in the Environment

Investment in the environmental and natural resource base of the Caribbean Community and its Member States is an investment in securing the Region's social and economic viability and enhancing its competitiveness. Mechanisms must therefore be found to mobilise the resources necessary, both from regional as well as extra-regional resources, to invest in the Region's environment. The core resources must however be generated from within the CSME Zone, irrespective of how financially disadvantaged the Member States of the Caribbean Community are perceived to be.

- The establishment of an independent source of resources—"Community Own Resources"—derived through automatic resource transfers from Member States for the Community. Catalytic, "core" resources should be provided from the "Community Own Resources" to facilitate the implementation of the Community Environmental and Natural Resources Management Policy Framework.
- The Regional Sustainability Fund for Caribbean SIDS agreed to by the Forum of Ministers of Environment for Latin America and the Caribbean, in November 2004, should be embraced by the Community and its Member States, and expanded with specific widows to accommodate the various fund initiatives being suggested for establishment in the Caribbean Community. The establishment of such a mechanism should provide the basis for a more systematic approach to the mobilisation of resources to support environment and sustainable development initiatives in the CSME Zone.
- The establishment of public-private partnerships (PPP) in order to facilitate their further growth and expansion of innovative initiatives which utilise the resources and technology to develop environmental goods and services, in particular, those with export potential.
- The establishment of an Environment and Sustainable Investment Facility (ESDIF) by the Community to facilitate access to financial resources, specifically to invest in projects aimed at the sustainable utilisation of environmental resources, where currently resources are limited. A special pool of resources from the Regional Development Fund established pursuant to the CARIFORUM/EU EPA could be allocated specifically for the establishment of this Facility.
- The mainstreaming of sustainability practices in the financial sector. In this regard, the recommendation resulting from the Barbados Workshop in November 2008 should be acted upon by the appropriate institutions.
- The establishment of a regime for incentives, pursuant to Article 54.2. (b).RT, for the development of the service sector in the Caribbean Community is also relevant to trade in environmental services. Economic instruments for environmental and natural resources management should form an integral part of the regime for the service industry in the CSME Zone.

(c) Human Resources

The Community's human resources capability, including those contained in the Caribbean Diaspora, is an asset which needs to be harnessed as a region in order to increase its marketability globally. Mechanisms, however, need to be established by the

Community and its Member States to facilitate this. The environmental service providers in the CSME Zone have both the technical skills and experience to be competitive internationally. Both the environmental service provider, themselves and officialdom have roles to play in maximizing the dividend which a SME provides, in this regard.

- The horizontal integration of the environmental services skills within the CSME Zone, as well as between persons, natural and juridical, from the CSME Zone and those from third countries, as a means of competing globally, should be promoted. This will require a firm or groups of firms to bring their expertise together to undertake complete projects.
- Support for the horizontal integration of skills and expertise across the CSME Zone should be one of the priority areas of focus for the portfolio of the Caribbean Investment Fund.
- The Small Island Developing States Technical Assistant Programme (SIDS/TAP), which is an integral part of the implementation strategy of the BPOA, should be reconfigured and used as a platform for expanding trade in services, including in environmental services between and among SIDS, as a first step and expanding to other developing countries. Since SIDS/TAP is a modality agreed to by the international community, catalytic resources should by sought from them to launch such a programme.

- To facilitate this and to provide Community nationals with the opportunities to trade their services, the Community and its Member States should establish a Caribbean Community Technical Assistance Programme, support by a **C**aribbean Community Trust Fund (CCTF). The core resources for the capitalisation of the CCTF should be provided from the "Community Own Resources". The purpose of these mechanisms is to enable the Caribbean Community to provide technical assistance not only to its Member States, but also to other countries, particularly SIDS and other developing countries

Conclusion

The environmental industry in the CSME Zone is not insignificant. Even with the limitation of hard data, it is evident that its scope is considerable. One constraint however, is that the environment is not considered as an industry, in its own right in the CSME Zone. Hence many environmental services are not normally classified as such. A greater focus on trade in environmental goods and services in the CSME Zone should increase the awareness of the importance of the environment industry to the future development of the CSME Zone.

Most of the recommendations made in this paper can be implemented in a reasonable period of time if the political will exists to do so. Many of the recommendations made have been subject of discussion over the years. At the policy level, the suggestions with respect to the legal and institutional arrangement necessary for the effective functioning of the CSME have been on the table for over a decade. As an example, the issue of the establishment of a CARICOM Commissioner goes back to the decision of the Conference in 1990 to establish a CARICOM Commissioner to commence functioning by 1 October 1990[99] and has been considered by the Community, *ad infinitum*.

The concept of the SIDS/TAP is an integral part of the BPOA which has been adopted by the international community since 1994. In the area of financing, the concept of the Regional Sustainable Fund (RSF) has been endorsed by the Forum of Minister for Latin America and the Caribbean since 2004 and a study undertaken since 2005 to determine its feasibility. The issue of the "Community Own Resources" has been subject to consideration since the 1980's and in 1991 the Conference mandated the establishment of a Working Group of Senior Officials to examine the question of a source of funds for the Community[100]. Much of the ground work have been done on many of the issues which are required for creating the enabling environment necessary for the expansion of the environmental services sector in the CSME Zone. What is required immediately is action rather than only articulation.

[99] Communiqué Issued at the Conclusion of the Eleventh Meeting of Conference of Heads of Government of the Caribbean Community, 31 July-02August 1990, Kingston, Jamaica.

[100] The West Indies Commission, Report of the West Indian Commission, Time for Action. The Press, University of the West Indies, Mona, Jamaica, West Indian Commission, 1993.

ANNEX 1
SERVICES SECTORAL CLASSIFICATION LIST[101]

SECTORS AND SUB-SECTORS		CORRESPONDING CPC
1.	**BUSINESS SERVICES**	Section B
A.	Professional Services	
a.	Legal Services	
b.	Accounting, auditing and bookkeeping services	862
c.	Taxation Services	863
d.	Architectural services	8671
e.	Engineering services	8672
f.	Integrated engineering services	8673
g.	Urban planning and landscape architectural services	8674
h.	Medical and dental services	9312
i.	Veterinary services	932
j.	Services provided by midwives, nurses, physiotherapists and para-medical personnel	93191
k.	Other	
B.	Computer and Related Services	
a.	Consultancy services related to the installation of computer hardware	841
b.	Software implementation services	842
c.	Data processing services	843
d.	Data base services	844
e.	Other	
C.	Research and Development Services	
a.	R&D services on natural sciences	851
b.	R&D services on social sciences and humanities	852
c.	Interdisciplinary R&D services	853
D.	Real Estate Services	
a.	Involving own or leased property	821
b.	On a fee or contract basis	822
E.	Rental/Leasing Services without Operators	
a.	Relating to ships	83103
b.	Relating to aircraft	83104
c.	Relating to other transport equipment	83101+83102+
d.	Relating to other machinery and equipment	83106-83109
e.	Other	
F.	Other Business Services	
a.	Advertising services	871
b.	Market research and public opinion polling services	864
c.	Management consulting service	865
d.	Services related to man. consulting	866
e.	Technical testing and analysis serv.	8676
f.	Services incidental to agriculture, hunting and forestry	881

[101] World Trade Organisation (WTO), MTN.GNS/W/120, Services Sectoral Classification List, Note By The Secretariat, 10 July 1991.

g.	Services incidental to fishing	882
h.	Services incidental to mining	883+5115
i.	Services incidental to manufacturing	884+885
j.	Services incidental to energy distribution	887
k.	Placement and supply services of Personnel	872
l.	Investigation and security	873
m.	Related scientific and technical consulting services	8675
n.	Maintenance and repair of equipment (not including maritime vessels, aircraft or other transport equipment)	633+ 8861-8866
o.	Building-cleaning services	874
p.	Photographic services	875
q.	Packaging services	876
r.	Printing, publishing	88442
s.	Convention services	87909*
t.	Other	
2.	**COMMUNICATION SERVICES**	
A.	Postal services	7511
B.	Courier services	7512
C.	Telecommunication services	
a.	Voice telephone services	7521
b.	Packet-switched data transmission services	7523**
c.	Circuit-switched data transmission services	7523**
d.	Telex services	7523**
e.	Telegraph services	7522
f.	Facsimile services	7521**+7529**
g.	Private leased circuit services	7522**+7523**
h.	Electronic mail	7523**
i.	Voice mail	7523**
j.	On-line information and data base retrieval	7523**
k.	electronic data interchange (EDI)	7523**
l.	enhanced/value-added facsimile services, incl. store and forward, store and retrieve	7523**
m.	code and protocol conversion	n.a.
n.	on-line information and/or data processing (incl.transaction processing)	843**
o.	other	
D.	Audiovisual services	
a.	Motion picture and video tape production and distribution services	9611
b.	Motion picture projection service	9612
c.	Radio and television services	9613
d.	Radio and television transmission services	7524
e.	Sound recording	n.a.
f.	Other	
E.	Other	
3.	**CONSTRUCTION AND RELATED ENGINEERING SERVICES**	

* The (*) indicates that the service specified is a component of a more aggregated CPC item specified elsewhere in this classification list.

** The (**) indicates that the service specified constitutes only a part of the total range of activities covered by the CPC concordance (e.g. voice mail is only a component of CPC item 7523).

A.	General construction work for buildings	512
B.	General construction work for civil engineering	513
C.	Installation and assembly work	514+516
D.	Building completion and finishing work	517
E.	Other	
4.	**DISTRIBUTION SERVICES**	
A.	Commission agents' services	621
B.	Wholesale trade services	622
C.	Retailing services	631+632
D.	Franchising	8929
E.	Other	
5.	**EDUCATIONAL SERVICES**	
A.	Primary education services	921
B.	Secondary education services	922
C.	Higher education services	923
D.	Adult education	924
E.	Other education services	929
6.	**ENVIRONMENTAL SERVICES**	
A.	Sewage services	9401
B.	Refuse disposal services	9402
C.	Sanitation and similar services	9403
D.	Other	
7.	**FINANCIAL SERVICES**	
A.	All insurance and insurance-related services	812**
a.	Life, accident and health insurance services	8121
b.	Non-life insurance services	8129
c.	Reinsurance and retrocession	81299*
d.	Services auxiliary to insurance (including broking and agency services)	8140
B.	Banking and other financial services (excl. insurance)	
a.	Acceptance of deposits and other repayable funds from the public	81115-81119
b.	Lending of all types, incl., inter alia, consumer credit, mortgage credit, factoring and financing of commercial transaction	8113
c.	Financial leasing	8112

d.	All payment and money transmission services		81339**
e.	Guarantees and commitments		81199**
f.	Trading for own account or for account of customers, whether on an exchange, in an over-the-counter market or otherwise, the following:		
	- money market instruments (cheques, bills, certificate of deposits, etc.)		81339**
	- foreign exchange		81333
	- derivative products incl., but not limited to, futures and options		81339**
	- exchange rate and interest rate instruments, inclu. products such as swaps, forward rate agreements, etc.		81339**
	- transferable securities		81321*
	- other negotiable instruments and financial assets, incl. bullion		81339**
g.	Participation in issues of all kinds of securities, incl. under-writing and placement as agent (whether publicly or privately) and provision of service related to such issues		8132
h.	Money broking		81339**
i.	Asset management, such as cash or portfolio management, all forms of collective investment management, pension fund management, custodial depository and trust services		8119+** 81323*
j.	Settlement and clearing services for financial assets, incl. securities, derivative products, and other negotiable instruments	or	81339** 81319**
k.	Advisory and other auxiliary financial services on all the activities listed in Article 1B of MTN.TNC/W/50, incl. credit reference and analysis, investment and portfolio research and advice, advice on acquisitions and on corporate restructuring and strategy	or	8131 8133
l.	Provision and transfer of financial information, and financial data processing and related software by providers of other financial services		8131
C.	Other		
8.	**HEALTH RELATED AND SOCIAL SERVICES** (other than those listed under 1.A.h-j.)		
A.	Hospital services		9311
B.	Other Human Health Services		9319 (other than 93191)
C.	Social Services		933
D.	Other		
9.	**TOURISM AND TRAVEL RELATED SERVICES**		
A.	Hotels and restaurants (incl. catering)		641-643
B.	Travel agencies and tour operators services		7471
C.	Tourist guides services		7472
D.	Other		

10.	**RECREATIONAL, CULTURAL AND SPORTING SERVICES** (other than audiovisual services)	
A.	Entertainment services (including theatre, live bands and circus services)	9619
B.	News agency services	962
C.	Libraries, archives, museums and other cultural services	963
D.	Sporting and other recreational services	964
E.	Other	
11.	**TRANSPORT SERVICES**	
A.	Maritime Transport Services	
a.	Passenger transportation	7211
b.	Freight transportation	7212
c.	Rental of vessels with crew	7213
d.	Maintenance and repair of vessels	8868**
e.	Pushing and towing services	7214
f.	Supporting services for maritime transport	745**
B.	Internal Waterways Transport	
a.	Passenger transportation	7221
b.	Freight transportation	7222
c.	Rental of vessels with crew	7223
d.	Maintenance and repair of vessels	8868**
e.	Pushing and towing services	7224
f.	Supporting services for internal waterway transport	745**
C.	Air Transport Services	
a.	Passenger transportation	731
b.	Freight transportation	732
c.	Rental of aircraft with crew	734
d.	Maintenance and repair of aircraft	8868**
e.	Supporting services for air transport	746
D.	Space Transport	733
E.	Rail Transport Services	
a.	Passenger transportation	7111
b.	Freight transportation	7112
c.	Pushing and towing services	7113
d.	Maintenance and repair of rail transport equipment	8868**
e.	Supporting services for rail transport services	743
F.	Road Transport Services	
a.	Passenger transportation	7121+7122
b.	Freight transportation	7123
c.	Rental of commercial vehicles with operator	7124
d.	Maintenance and repair of road transport equipment	6112+8867
e.	Supporting services for road transport services	744
G.	Pipeline Transport	
a.	Transportation of fuels	7131
b.	Transportation of other goods	7139

H.	Services auxiliary to all modes of transport	
a.	Cargo-handling services	741
b.	Storage and warehouse services	742
c.	Freight transport agency services	748
d.	Other	
I.	Other Transport Services	

12.	**OTHER SERVICES NOT INCLUDED ELSEWHERE**	95+97+98+99

ANNEX 2

Approved GEF National and Regional Project Involving Only the Member States of the Caribbean Community 1994-2009 (January)

PROJECT	PARTICIPATING COUNTRIES	GEF GRANT (millions)
Caribbean Planning for Adaptation to Global Climate Change (CARICOM)	Regional (Antigua and Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, Trinidad and Tobago)	6,825,000.00
Caribbean: Mainstreaming Adaptation to Climate Change	Regional (Antigua And Barbuda, Bahamas, Barbados, Belize, Dominica, Grenada, Guyana, Jamaica, St. Kitts And Nevis, St. Lucia, St. Vincent and Grenadines, Trinidad and Tobago)	5,345,000.00
Caribbean Renewable Energy Development Programme	Regional (Antigua and Barbuda, Bahamas, Barbados, Belize, British Virgin Islands, Cuba, Dominica, Grenada, Guyana, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and Grenadines, Suriname, Trinidad and Tobago, Turks and Caicos)	4,776,000.00
Building Capacity for Conducting Vulnerability and Adaptation Assessments in the Caribbean Region	Regional (Antigua and Barbuda, Barbados, Belize, Grenada, Guyana, Jamaica, St. Lucia, Suriname, Trinidad and Tobago)	117,744 .00
BS Implementation of National Biosafety Frameworks in Caribbean Sub Region Countries of Bahamas, Belize, Grenada, Guyana and Suriname in the Context of a Regional Project	Regional (Bahamas, Belize, Grenada, Guyana, Suriname)	2,628,450.00
Integrating Watershed and Coastal Area Management (IWCAM) in the Small Island Developing States of the Caribbean	Regional (Antigua and Barbuda, Bahamas, Barbados, Cuba, Dominica, Dominican Republic, Grenada, Haiti, Jamaica, St. Lucia, St. Kitts and Nevis, St. Vincent and Grenadines, Trinidad and Tobago)	13,990,841.00
BS Regional Project for Implementing National Biosafety Frameworks in the Caribbean Sub-region - under the GEF Biosafety Program	Regional (Antigua And Barbuda, Barbados, Dominica, St. Kitts And Nevis, St. Lucia, St. Vincent and Grenadines, Trinidad and Tobago)	3,454,545.00
OECS Protected Areas and Associated Sustainable Livelihoods	Regional (Antigua And Barbuda, Dominica, Grenada, St. Kitts And Nevis, St. Vincent and Grenadines, St. Lucia)	3,871,000.00
Implementation of Pilot Adaptation Measures in coastal areas of Dominica, St. Lucia and St. Vincent & the Grenadines	Regional (Dominica, St. Lucia, St. Vincent and Grenadines)	2,400,000.00
Total	.	**56,275,774.00**

Source: Compiled by the Author from the Global Environment Facility Project Data Base at www.gefweb.org