



United Nations

ECLAC

ECLAC SUBREGIONAL HEADQUARTERS FOR THE CARIBBEAN

FOCUS

Magazine of the Caribbean Development and Cooperation Committee (CDCC)

CARIBBEAN SAMOA PATHWAY PRIORITIZED

ISSUE I / JANUARY - MARCH 2019

ABOUT ECLAC/CDCC

The Economic Commission for Latin America and the Caribbean (ECLAC) is one of five regional commissions of the United Nations Economic and Social Council (ECOSOC). It was established in 1948 to support Latin American governments in the economic and social development of that region. Subsequently, in 1966, the Commission (ECLA, at that time) established the subregional headquarters for the Caribbean in Port of Spain to serve all countries of the insular Caribbean, as well as Belize, Guyana and Suriname, making it the largest United Nations body in the subregion.

At its sixteenth session in 1975, the Commission agreed to create the Caribbean Development and Cooperation Committee (CDCC) as a permanent subsidiary body, which would function within the ECLA structure to promote development cooperation among Caribbean countries. Secretariat services to the CDCC would be provided by the subregional headquarters for the Caribbean. Nine years later, the Commission's widened role was officially acknowledged when the Economic Commission for Latin America (ECLA) modified its title to the Economic Commission for Latin America and the Caribbean (ECLAC).

Key Areas of Activity

The ECLAC subregional headquarters for the Caribbean (ECLAC/CDCC secretariat) functions as a subregional think-tank and facilitates increased contact and cooperation among its membership. Complementing the ECLAC/CDCC work programme framework, are the broader directives issued by the United Nations General Assembly when in session, which constitute the Organisation's mandate. At present, the overarching articulation of this mandate is the Millennium Declaration, which outlines the Millennium Development Goals.

Towards meeting these objectives, the Secretariat conducts research; provides technical advice to governments, upon request; organizes intergovernmental and expert group meetings; helps to formulate and articulate a regional perspective within global forums; and introduces global concerns at the regional and subregional levels.

Areas of specialization include trade, statistics, social development, science and technology, and sustainable development, while actual operational activities extend to economic and development planning, demography, economic surveys, assessment of the socio-economic impacts of natural disasters, climate change, data collection and analysis, training, and assistance with the management of national economies.

The ECLAC subregional headquarters for the Caribbean also functions as the Secretariat for coordinating the implementation of the Programme of Action for the Sustainable Development of Small Island Developing States. The scope of ECLAC/CDCC activities is documented in the wide range of publications produced by the subregional headquarters in Port of Spain.

MEMBER COUNTRIES

Antigua and Barbuda	Haiti
The Bahamas	Jamaica
Barbados	Saint Kitts and Nevis
Belize	Saint Lucia
Cuba	Saint Vincent and the Grenadines
Dominica	Suriname
Dominican Republic	Trinidad and Tobago
Grenada	
Guyana	

ASSOCIATE MEMBERS:

Anguilla
Aruba
British Virgin Islands
Cayman Islands
Curaçao
Guadeloupe
Martinique
Montserrat
Puerto Rico
Sint Maarten
Turks and Caicos Islands
United States Virgin Islands

CONTENTS

Director's Desk: Caribbean SAMOA Pathway prioritized	3
Implementation of the SAMOA Pathway in synergy with other Sustainable Development Agendas	4
Disasters and Small Island Developing States (SIDS): Where Geography and Vulnerability Meet	6
Renewable Energy: New Options for Energy Security and Beyond in Caribbean Small Island Developing States	8
Intangible Cultural Heritage for Sustainable Development in the Caribbean	10
The CLME+ SAP initiative as an integrated regional management approach to ocean governance in the Wider Caribbean Region (WCR)	12

FOCUS: ECLAC in the Caribbean is a publication of the Economic Commission for Latin America and the Caribbean (ECLAC) subregional headquarters for the Caribbean/Caribbean Development and Cooperation Committee (CDCC).

EDITORIAL TEAM:

Director	Diane Quarless, ECLAC
Editor	Alexander Voccia, ECLAC
Copy Editor	Denise Balgobin, ECLAC
Coordinator	Omar Bello, ECLAC
Design	Blaine Marciano, ECLAC

Cover Photo: Courtesy Pixabay.com

Produced by ECLAC

CONTACT INFORMATION

ECLAC Subregional Headquarters for the Caribbean
PO Box 1113, Port of Spain, Trinidad and Tobago
Tel: (868) 224-8000
E-mail: spou-pos@eclac.org Website: www.eclac.org/portofspain



DIRECTOR'S DESK: CARIBBEAN SAMOA PATHWAY PRIORITIZED

2019 is an important year for Small Island Developing States (SIDS) as the UN General Assembly will convene a one-day high level review of the progress made in implementation the SIDS Accelerated Modalities of Action (SAMOA) Pathway in September of this year.

This issue of FOCUS aims at refocusing international attention to the urgent sustainable development needs of Caribbean SIDS. We will explore, in particular, these opportunities from five distinct angles: the benefits of supporting synergies between the SAMOA Pathway and other global sustainable development agendas; the need to build resilience while mitigating risk and uncertainty; the perspectives that renewable energy (RE) technologies offer open for Caribbean SIDS to address energy security challenges; the value of our intangible cultural heritage to Caribbean SIDS development and the importance of an effective regional governance mechanism for the transboundary marine resources of the Wider Caribbean Region (WRC).

The responses to the sustainable development challenges which SIDS face are consistent with the objectives and purpose of several UN mandates.¹ Supporting the purpose of having a comprehensive sustainable development strategy and drawing on recent decisions of the Caribbean Development and Cooperation Committee we will argue for coherency and consistency in policy plus monitoring and reporting across agendas. While disasters can undermine the

sustainable development progress, their frequency and impact vary significantly among the SIDS geographical regions. We will therefore offer an analysis of disaster trends and effects in these three SIDS regions. This analysis will also conclude that the Caribbean SIDS-region is more vulnerable to disasters relative to other regions.

Another area of focus is the need for sustainable energy sources among Caribbean SIDS. The sub-region's high dependence on imported fossil fuel has, over time, exposed these small open economies to the vagaries of international energy markets, through price and supply shocks. While climate change and its impacts may have exacerbated these concerns, rapidly evolving renewable energy (RE) technologies offer new opportunities for Caribbean SIDS to address their energy security needs by satisfying the energy demands of key economic sectors.

Another issue discussed is the importance of the Intangible Cultural Heritage (ICH) to development. The SAMOA Pathway enlists ICH as a priority for supporting the sustainable development priorities of SIDS. In this context we investigate the opportunities that exist to create the drive

for protecting, investing, promoting and growing the region's creative industries.

The FOCUS also examines the importance of healthy coastal and ocean ecosystems which are essential for a thriving ocean-based economy and the continued well-being of Caribbean people. These ecosystems provide food, employment, energy and recreation, and are part of our Caribbean SIDS culture. We discuss the need for a multi-country, regional cooperative approach to marine and ocean resource management for the Caribbean region.

As the global community prepares for the mid-term review of SAMOA Pathway implementation, I hope that this edition contributes to focusing the attention of the international community in the very real challenges that the Caribbean SIDS continue to confront.

Yours in Focus

A handwritten signature in black ink, appearing to read 'Diane Quarless'.

Diane Quarless

¹ Transforming our world: the 2030 Agenda for Sustainable Development, (cited February 15, 2019) available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/RES/70/1&Lang=E



IMPLEMENTATION OF THE SAMOA PATHWAY¹ IN SYNERGY WITH OTHER SUSTAINABLE DEVELOPMENT AGENDAS

Artie Dubrie*

The SAMOA Pathway (2014)¹ is an agreed global platform that focuses on the economic, social and environment sustainable development priorities and challenges of Small Island Developing States (SIDS)² and gives coherence to the response to SIDS issues in United Nations (UN) processes at the national, regional and global levels.³

It is to be noted that the objectives of the SAMOA Pathway are congruent with such global sustainable development agendas as the 2030 Sustainable Development Agenda and its 17 goals (Agenda 2030), the Sendai Framework for Disaster Risk Reduction (2015); the Addis Ababa Action Agenda (2015); the Paris Agreement (2015) and the New Urban Agenda (2015). To address these simultaneously, the implementation of the sustainable development agendas will require institutional approaches that are cross-cutting, multi-sectoral and integrated.

In the Caribbean region, member countries and intergovernmental bodies have developed institutional and other mechanisms for the management of sustainable development portfolios.⁴ Supporting this progressive approach, the recent 2018 UN report, noted that many countries have reported on the coordinated involvement of ministries, such as ministries of planning, finance, in the mainstreaming of the Agenda 2030 - Sustainable Development Goals (SDGs) into sectoral/line ministries, as

well as the integration of SDG targets within national development plans and policies. In keeping with a multi-stakeholder approach to implement the SDGs, countries have also reported efforts to engage several partners including civil society, academia and private sectors.⁵ These coordinated institutional arrangements support evidence-based decision-making, policies making, reporting and in the reviews of progress in the drive towards sustainable development.⁶

Cognizant of the requirements for building synergies across agendas, Table 1 below provides an example of a mapping of the SAMOA Pathway priorities against the 17- SDG of Agenda 2030.

The purpose of pursuing multisectoral and institutionally coordinated approaches in the implementation of the SIDS sustainable development agendas are further addressed in such regional platforms as the Caribbean Development Cooperation Committee - Regional Coordinating Mechanism for Sustainable Development (CDCC-RCM)⁷ and the

United Nations Caribbean Multi-country Sustainable Development Framework (UN Caribbean MSDF, 2017-2021).⁸

The CDCC-RCM was established in 2006 as a regional coordinating mechanism for sustainable development activities in the Caribbean.⁹ Recent intergovernmental meetings have sought to revitalise and give renewed purpose to the role of the CDCC RCM. The Twenty-seventh session of the Caribbean Development and Cooperation Committee (CDCC, April 2018)¹⁰ in its Resolution 100 (XXVII) reaffirms its commitment to fully operationalize the CDCC- RCM and with a view to monitoring and supporting its role in the implementation of the SAMOA Pathway and the 2030 Agenda. At the Caribbean Midterm Review of the SAMOA Pathway (San Pedro, August 2018),¹¹ the recommendation was taken that the CDCC-RCM once fully functional, can serve as a natural institutional home for the monitoring, reviewing and reassessment of priorities in the implementation of SIDS sustainable development agendas. In fact, the San Pedro meeting called for the

* Artie Dubrie is a Sustainable Development Officer at the Economic Commission for Latin America and the Caribbean, Subregional headquarters for the Caribbean, Port of Spain, Trinidad and Tobago.

¹ Small Island Developing States Accelerated Modalities of Action (SAMOA Pathway).

SAMOA Pathway document available at: http://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.223/10&Lang=E

² The SIDS Agenda comprises the Barbados Programme of Action (BPoA), the Mauritius Strategy for Implementation of the BPoA and the SAMOA Pathway

³ SAMOA Pathway (November 2014), paragraph 120.

⁴ Caribbean Midterm review report in the implementation of the SAMOA Pathway (cited February 19, 2019), available at https://sustainabledevelopment.un.org/content/documents/20949Caribbean_SAMOA_Pathway_Midterm_report_18_Oct.2018_final_draft1.pdf

⁵ SDG Synthesis report (2018), pp19, available at: <https://unhabitat.org/sdg-11-synthesis-report/>

⁶ ECLAC Subregional Headquarters for the Caribbean Focus Magazine CDCC, sourced February 19, 2019) available at <http://repositorio.cepal.org/bitstream/handle/11362/44294/1/FOCUSIssue2Apr-Jun2018.pdf>

⁷ The RCM was established in 2006, pursuant to resolution 65(XXI), adopted by CDCC at its twenty-first session in 2006, the CDCC RCM calls that the member countries set up a regional coordinating mechanism for sustainable development activities in the Caribbean (March 2019), available at: <https://www.cepal.org/en/headquarters-and-offices/eclac-caribbean/committees>

⁸ The UN Caribbean Multi-country Sustainable Development Framework (cited March 2019) <http://www.2030caribbean.org/content/unct/caribbean/en/home/MSDF/overview.html>

⁹ Further details on the establishment of the CDCC RCM (cited March 2019) available at: <https://www.cepal.org/en/headquarters-and-offices/eclac-caribbean/committees>

¹⁰ Twenty-Seventh Session of CDCC, Resolution 100 (XXVII) Ensuring Synergy in The Implementation of The Sustainable Development Goals of the 2030 Agenda for Sustainable Development and The Small Islands Developing States Accelerated Modalities of Action in The Caribbean Subregion (April, 2018), available at: https://www.cepal.org/sites/default/files/events/files/lcar2018_02.pdf

¹¹ SAN PEDRO DECLARATION Caribbean Regional Preparatory Meeting, San Pedro, Belize, (August 2018) available at: https://sustainabledevelopment.un.org/content/documents/20630San_Pedro_Declaration_final_version.pdf

Table I. SAMOA Pathway: Economic, Social and Environmental Pillar Aligned with the SDG Equivalent^a

Pillar	SAMOA Pathway Priority	SDG Goal
Economic	Sustained and Sustainable, inclusive and equitable economic growth with decent work for all	8
	Development and Poverty Eradication	1
	Sustainable Tourism	8
	Sustainable Energy	7
	Sustainable Transportation	7
Social	Food Security and Nutrition	2
	Water and Sanitation	6
	Health and Non-Communicable Diseases	3
	Gender Equality and Women Empowerment	5
	Social Development	10
	Culture and Sport ^b	
	Promoting peaceful societies and safe communities	16
	Education	4
Environment	Climate Change	13
	Disaster risk reduction	11
	Oceans and Seas	14
	Sustainable consumption and production	12
	Management of Chemicals and waste, including hazardous waste	6
	Biodiversity	15
	Desertification, land degradation and drought	
	Forest	
	Invasive Alien species	

^a Adopted from the: Advanced unedited copy of the report (UNGA 74, 2019): Follow-up to and implementation of the SIDS Accelerated Modalities of Action (SAMOA) Pathway and the Mauritius Strategy for the Further Implementation of the Programme of Action for the Sustainable Development of Small Island Developing States Report of the Secretary-General (cited May 2019), available at: https://sustainabledevelopment.un.org/content/documents/221852019_SG_Report_SAMOA_Pathway_Advance_unedited_copy.pdf

^b It must be highlighted however, that due to overlap in categorization and focus, several priorities in the SAMOA Pathway do require their own measuring tool to ensure accurate assessment.

revitalisation of the CDCC- RCM, with a view to advancing political advocacy on SIDS issues at the regional level, facilitating SIDS-SIDS cooperation and spearheading implementation of the SAMOA Pathway in a coherent and effective manner.

Turning to the UN Caribbean MSDF (2017-2021), this multi-country sustainable development framework for the Caribbean was negotiated to support the realization of the 2030 Agenda and its SDGs, the SAMOA Pathway and other international development platforms. It is supported by the full range of UN agencies funds and programs serving the English and Dutch speaking Caribbean. The reporting template for the UN Caribbean MSDF maps the sustainable development priorities of the Caribbean Community (CARICOM) Strategic Plan (2015-2019), the SAMOA Pathway and

the SDGs.¹²

HOW TO ACHIEVE COHERENCE ACROSS AGENDAS

Drawing on the outcomes of recent national and regional developments towards achieving a more synergistic approach in the implementation of the sustainable development agendas, the following recommendations are enlisted:

a. Conduct of a detailed assessment of the CDCC-RCM to define a road map with assigned resources, management and reporting structure.

b. Resource mobilization and capacity development for the establishment and management of implementation synergies across sustainable development agendas. This is also an important knowledge management asset towards

supporting continuity when there are changes in national and regional focal points.

c. Employment of information technology and data management platforms as tools in the implementation of the sustainable development agendas. This can also provide towards reducing the reporting burdens across agendas.

d. Integration of the SIDS sustainable development agenda into formal educational curricula at primary, secondary and tertiary levels.

e. Targeted advocacy, communication, outreach and awareness raising on the economic, social and environmental vulnerabilities, priorities and opportunities for sustainable development in the Caribbean SIDS. ■

¹² The UN Caribbean Multi-country Sustainable Development Framework (cited March 2019) <http://www.2030caribbean.org/content/unct/caribbean/en/home/MSDF/overview.html>



DISASTERS AND SMALL ISLAND DEVELOPING STATES (SIDS): WHERE GEOGRAPHY AND VULNERABILITY MEET

Omar Bello and Luciana Fontes de Meira*

Disasters affect sustainable development through their impact on human, environmental and financial resources, setting back the gains made over time. These impacts are especially challenging for SIDS, as is stated in the Global Assessment Report on Disaster Risk Reduction¹: “compared to Europe and Central Asia, SIDS are expected to lose on average 20 times more of their capital stock each year in disasters”.

Geographical location in hazard-prone regions, limited physical size and high-population density in low-elevation coastal areas exposes the human assets and infrastructure of SIDS to greater than average natural threats.² For example, disasters have a relatively greater impact on an island in the Caribbean than it would have on a country in continental Latin America since the impact on the former tends to have national dimension.³

In light of this, an interesting question that arises is whether it is possible to discern differences in disaster patterns among the SIDS themselves. This article analyses disaster trends and their effects in the three geographic regions where SIDS are located; the Caribbean,⁴ the Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS)⁵ and the Pacific.⁶

Another question to be addressed is whether all SIDS should approach the issue of disasters in the same way, or whether there are specificities to be considered in each region. To properly answer this question, we use the EM-DAT collection of data⁷ on disasters worldwide, and analyze and compare trends in natural hazards in SIDS in the Caribbean, the AIMS and the Pacific region from 1990 to 2018. Given the available data,

four dimensions will be investigated: number and type of disasters; affected population; data availability; and damage in relation to GDP.

A) NUMBER AND TYPE OF DISASTERS

During the period 1990-2018, 341 disasters caused by natural hazards occurred in Caribbean SIDS, 203 in the Pacific SIDS, and 66 in the AIMS region.

The average number of disasters per decade was greater in every decade in the Caribbean when compared with the other two regions (see Table 1). A possible explanation for this is the concentration of Caribbean countries in a smaller spatial spread compared to small islands

in the Pacific and AIMS regions. For this reason, there is a greater probability that one natural hazard, for example a hurricane, will affect more than one country thereby causing more disasters per occurrence.

Regarding the historical data in recorded types of disasters, storms (52 per cent) and floods (33 per cent) are the most common ones in the Caribbean. In total, in this region 91 per cent of disasters were weather related. Even though hurricanes are the major disruptive force, flooding tends to periodically impact a large proportion of the population and should be prioritized in long term planning.

In the AIMS region, weather related events such as storms, flooding, and

Table 1 - Disasters (1990-2018)

	Caribbean	AIMS	Pacific
Number of Disasters	341	66	203
-- Annual Average --			
1990-99	8.7	2.1	6.9
2000-09	13.9	3.1	7.0
2010-18	12.8	1.6	7.1
Disasters with data about damage available	108	11	48

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Emergency Events Database (EM-DAT) [online] www.emdat.be

* Omar Bello is the Coordinator, and Luciana Fontes de Meira is an Associate Environmental Affairs Officer, of the Sustainable Development and Disaster Unit at the Economic Commission for Latin America and the Caribbean, Subregional headquarters for the Caribbean, Port of Spain, Trinidad and Tobago.

¹ UNISDR (2015). Making Development Sustainable: The Future of Disaster Risk Management. Global Assessment Report on Disaster Risk Reduction. Geneva, Switzerland: United Nations Office for Disaster Risk Reduction. p 74

² Sjøstedt, Martin & Povitkina, Marina (2016). Vulnerability of Small Island Developing States to Natural Disasters: How Much Difference Can Effective Governments Make? The Journal of Environment & Development. Vol 26, Issue 1.

³ Bello, O. (2017) “Desastres, crecimiento económico y respuesta fiscal en los países de América Latina y el Caribe, 1972-2010”. Revista de la CEPAL No. 120, abril 2017. Santiago, Chile.

⁴ 16 Caribbean countries considered: Antigua and Barbuda, Bahamas, Barbados, Belize, Cuba, Dominica, Dominican Republic, Grenada, Guyana, Haiti, Jamaica, Saint Kitts and Nevis, Saint Lucia, Saint Vincent and the Grenadines, Suriname, Trinidad and Tobago.

⁵ Atlantic, Indian Ocean, Mediterranean and South China Sea (AIMS) comprises 9 countries: Bahrain, Cabo Verde, Comoros, Guinea-Bissau, Maldives, Mauritius, Sao Tomé and Príncipe, Seychelles and Singapore.

⁶ The Pacific region is comprised of 13 countries: Fiji, Kiribati, Marshall Islands, Micronesia (Federated States of), Nauru, Palau, Papua New Guinea, Samoa, Solomon Islands, Timor-Leste, Tonga, Tuvalu, Vanuatu

⁷ EM-DAT contains essential core data on the occurrence and effects of over 22,000 mass disasters in the world from 1900 to the present day. The database is compiled from various sources, including UN agencies, non-governmental organizations, insurance companies, research institutes and press agencies.

Table 2 - Disasters by Type (1990-2018)

	Caribbean	AIMS	Pacific
Biological*	18	23	14
Droughts	19	6	17
Floods	112	11	39
Geophysical**	8	9	45
Other***	6	2	11
Storms*	178	15	77
Total	341	66	203

Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Emergency Events Database (EM-DAT) [online] www.emdat.be

*Biological hazards include viral and bacterial diseases

**Geophysical events include earthquake, tsunamis, and volcano eruptions

*** Other include forest fires, land fires and landslides

made available. In the Pacific region, weather related events such as storms, floods, and droughts to a lesser extent are likewise predominant (62 per cent). Storms represent 40 per cent of the total number of disasters. A distinctive feature of this region is that 19 per cent of the events were geophysical (earthquakes, tsunamis and volcano eruptions). While less frequent, droughts usually affect a larger proportion of the population when compared to other natural events. However, tsunamis and tropical cyclones tend to have larger economic impacts, although the data available in the Pacific and the AIMS for total damage is still limited.

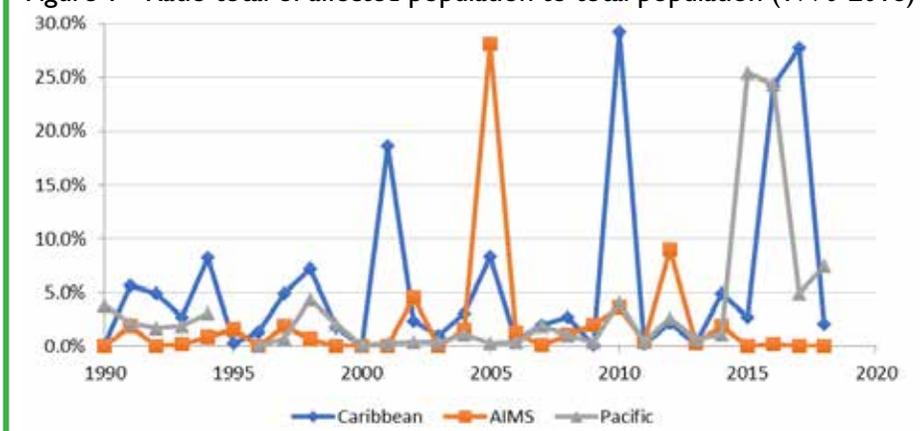
B) RATIO OF TOTAL AFFECTED POPULATION⁸ TO TOTAL POPULATION

This indicator demonstrates the average percentage of the affected population in the countries that experienced a disaster in a specific year.

The average of this indicator for the Caribbean SIDS is 5.8 per cent. In six years 2001, 2005, 2010, 2015, 2016 and 2017, the indicator was greater than 15 per cent. The maximum value, 29.2 per cent, was reached in 2010. For the Pacific SIDS, the average is lower at 3.5 per cent. Only in two years, 2014 and 2015, the average was greater than 15 per cent. The maximum value was 25.4 per cent in 2015. In the case of the AIMS, the average of this indicator was 2.1 per cent. Only in one year was this indicator greater than 15 per cent, reaching 28.1 per cent in 2005.

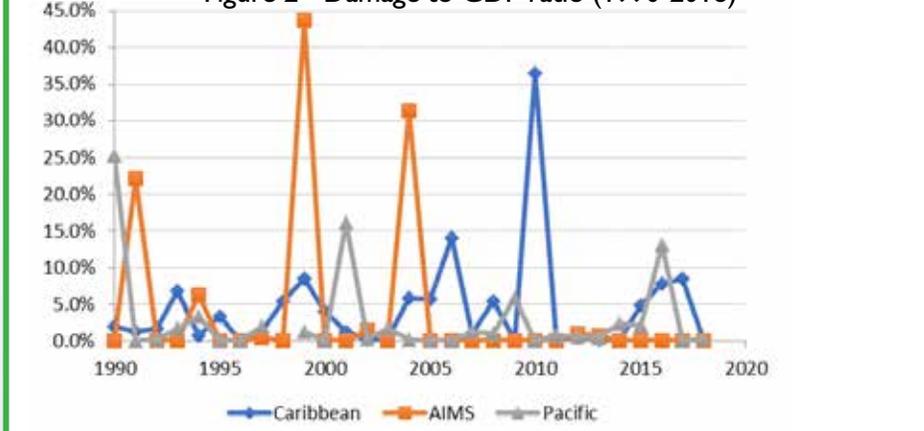
► (continued on page 14)

Figure 1 - Ratio total of affected population to total population (1990-2018)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Emergency Events Database (EM-DAT) [online] www.emdat.be

Figure 2 - Damage to GDP ratio (1990-2018)



Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Emergency Events Database (EM-DAT) [online] www.emdat.be

droughts are also the most frequent type of disasters (49 per cent), with storms representing 23 per cent of the total. However, biological hazards (viral and bacterial diseases) are also significant,

being the second most frequent type of disaster at 35 per cent. Although they affect a relatively large number of people, the economic impact of these events is regrettably not measured or

⁸ In term of the methodological approach, to compare the three groups of SIDS we use for each year a weighted average of the ratio affected population in island in relation to the total population in island. For each island, the weight is the ratio of the total population in island to the sum of the populations of all islands in its region that suffered a disaster that year.



RENEWABLE ENERGY: NEW OPTIONS FOR ENERGY SECURITY AND BEYOND IN CARIBBEAN SMALL ISLAND DEVELOPING STATES

Willard Phillips*

With very few exceptions,¹ Caribbean Small Island Developing States (SIDS) depends on energy imports to meet their economic and social needs. These imports are primarily fossil fuel. Guerra (2016) in an assessment of the energy matrix of Caribbean countries estimated that up to 62.6 per cent of the region's primary energy supply was obtained from crude oil, with a mere 3 per cent derived from hydro.

Measured in terms of the Energy/Supply Ratio (Figure 1), the region's high dependence on imported energy, over time, has added to balance of payment challenges and has exposed Caribbean economies to the vagaries of the international energy markets, through price and supply shocks. While climate change and its impacts have in turn exacerbated these concerns, rapidly evolving renewable energy (RE) technologies offer new opportunities for Caribbean SIDS to address their energy challenges. There is evidence to suggest that these countries are well disposed to seize the benefits of RE. Such benefits could also extend beyond the issue of energy security for high energy demand sectors, to include cost savings in both the water and food subsectors.

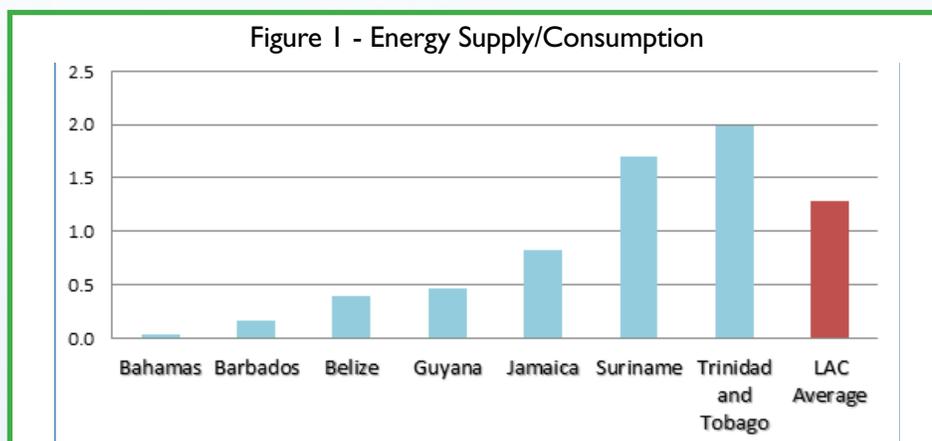
What then are the prospects for renewable energy development in

the Caribbean? Several assessments indicate that the subregion possesses substantial RE potential from solar, wind, geothermal, and even hydro-power sources. According to the International Renewable Energy Agency (IRENA), Caribbean SIDS possessed an installed capacity of RE of roughly 2.2 gigawatts in 2017 - sufficient energy to power 1,050 Caribbean homes² per period, with solar and wind being the RETS showing greatest growth over the previous 5 years.

Moreover, increases in installed RE capacity averaged 100MW per year during the same period. These achievements, however, remain relatively insignificant when assessed in terms of the subregion's actual potential. Schmidt and Sangermano (2017) note that the Caribbean has abundant sources of RE in the form of sun, wind and geothermal, with limited hydro. In the

case of solar, for example, the subregion boasts an annual solar resource of 5.46 kWh/m², higher than the largest solar markets of Hawaii, California, Texas and Spain. Additionally, average annual wind speeds approximate 7 m/s, similar to that of Texas and California, the two dominant wind energy producing states of the United States of America. Given its relatively high volcanic activity, the Caribbean region also has great potential for significant geothermal production, with countries including Dominica, Guadeloupe, Martinique, Montserrat, Saint Kitts and Nevis, Saint Lucia and Saint Vincent and the Grenadines, already pursuing projects in various stages of development. The larger Caribbean SIDS, Haiti, Jamaica and the Dominican Republic have also demonstrated hydro-electric potential.

The adoption of RE, however, provides more than an opportunity for addressing the energy security of Caribbean SIDS. This is because renewable energy has been shown to provide even broader options for sustainable development through the mechanism of an energy, water and food nexus (IRENA, 2017). This nexus, as shown in Figure 2, reflects the projected demand for water, energy and food up to 2050, and estimates that by that time, the global demand for energy will increase by 80 per cent; the demand for water by 55 per cent; and the demand for food by 60 per cent. At the same time, the input/output relationships among these



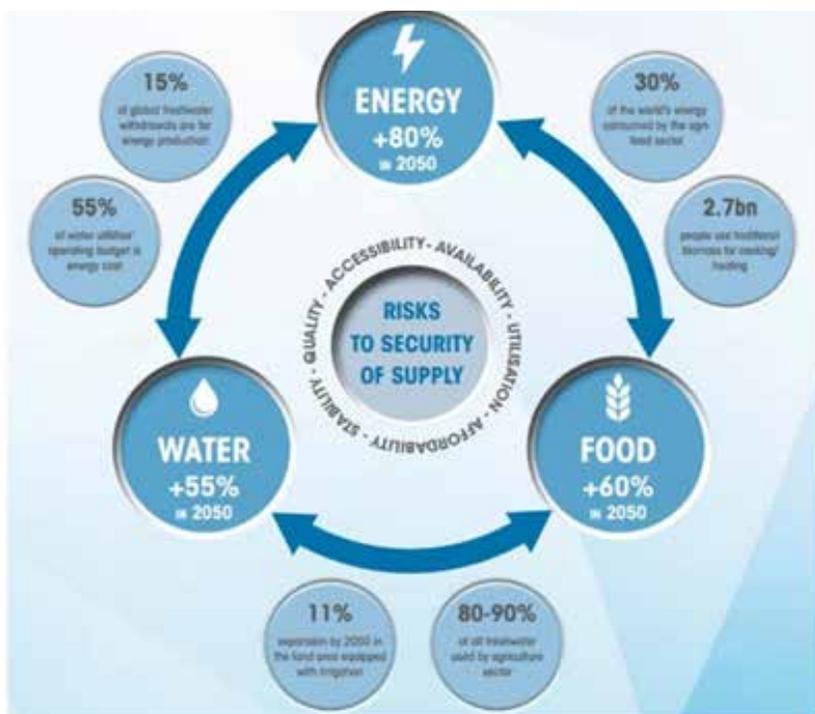
Source: Economic Commission for Latin America and the Caribbean (ECLAC) on the basis of Emergency Events Database (EM-DAT) [online] www.emdat.be

* Willard Phillips is an Economic Affairs Officer at the Economic Commission for Latin America and the Caribbean, Subregional headquarters for the Caribbean, Port of Spain, Trinidad and Tobago.

¹ Trinidad and Tobago, and Suriname. Guyana has recently discovered oil and is expected to become a net energy exporter within the next two years.

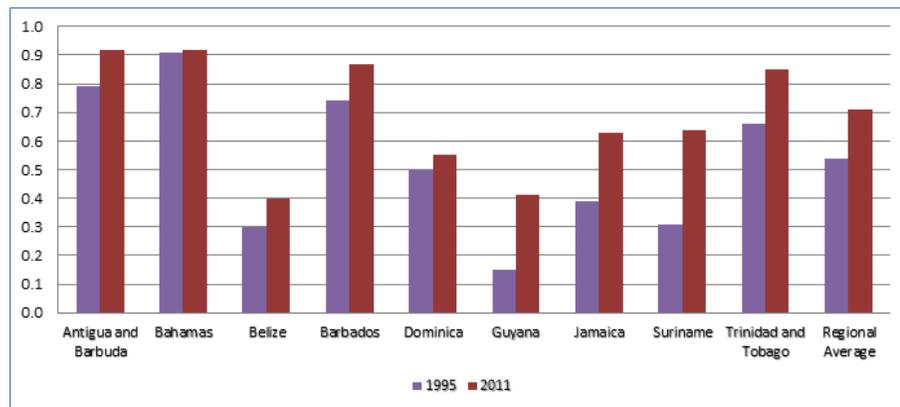
² Based on average monthly electricity consumption for Trinidad and Tobago of 2,100 KWh.

Figure 2: IRENA’s Renewable energy in the water, energy & food nexus



Source: IRENA, 2017

Figure 3: Selected Caribbean Food Import Dependency Ratios 1995 and 2011



Source: FAO, 2015

elements were projected to change such that up to 15 per cent of global fresh water abstraction will be used in energy production; 30 per cent of the world’s energy will be utilized in the agri-food sector; and between 80 and 90 per cent of all freshwater will be used by the agricultural sector.

As regards water, a resource in rapidly growing demand and exacerbated by limited fresh-water supply in some Caribbean countries, there has been significant expansion of the use of desalination plants for the production of potable water. Since 2007, 68 desalination plants have been commissioned in the Caribbean, which together amounted

to an installed processing capacity of 780,000 cubic meters of water per day in 2018 (Fluence, 2018). With energy representing approximately 75 per cent of water processing costs, the expansion of desalination has in turn increased the need for energy to both produce and distribute water to municipalities in the Caribbean. As noted by IRENA, the further development of RE offers enhanced prospects for reducing potable water production and distribution costs.

As in the case of energy, the Caribbean is a net importer of food (FAO, 2015) with most economies having a food import dependency ratio³ greater than 0.5 (Figure 3). The implications for the application of RE in food production is therefore less significant, given that a relatively small share of food consumed by Caribbean populations is produced in the subregion. Renewable energy, however, holds far more importance in the context of food storage, handling and distribution, since energy is an important input for refrigeration and transportation. This is especially critical for tourism and related service activities which typically constitute the largest economic sector in many Caribbean economies. The use of RE could, therefore, contribute to reducing food service operating costs, while at the same time enhancing the environmental sustainability of these enterprises.

► (continued on page 15)

³ Import dependency ratio (IDR) is defined as: $IDR = \text{imports} \times 100 / (\text{production} + \text{imports} - \text{exports})$



INTANGIBLE CULTURAL HERITAGE FOR SUSTAINABLE DEVELOPMENT IN THE CARIBBEAN

Elizabeth Thorne*

The Samoa Pathway specifically recognises Intangible Cultural Heritage (ICH), its significance in culture, indigenous and traditional knowledge and its power to unite people while advancing the sustainable development agenda.¹

This is understandable since the Caribbean subregion is blessed with a rich history, cultural experiences and creativity. The diverse cultures of the subregion are manifest in the oral and practiced traditions of the people, including their belief systems. These vibrant expressions serve as a memory of all who have lived in this Caribbean space. They are referred to as the Intangible Cultural Heritage (ICH). The United Nations Educational, Scientific and Cultural Organisation (UNESCO) supports the SAMOA Pathway as it considers that ICH includes traditions and living expressions, inherited from ancestors and passed down to their descendants through a traditional form of sharing (UNESCO 2019). The transmission of these traditions, knowledge and skills through the generations are integral to sustaining social, economic and environmental development of nations. They are inclusive, traditional, contemporary and ever-evolving and represent the

people's ability to adapt to their present environment.

These practices are community based and contribute to natural resources conservation, creating social cohesion, a common identity and a sense of community.²

INTANGIBLE CULTURAL HERITAGE IN THE CARIBBEAN SIDS

An important question is how can Intangible Cultural Heritage contribute to the sustainable development of Caribbean SIDS?

Caribbean peoples have made significant contributions to literature, history and music through their continued practice and sharing of ICH. For example, the steel-pan, originating in Trinidad and Tobago from the "belly" of the community of Laventille, is the only acoustic instrument to have been invented in the twentieth century and is now

recognised worldwide (National Library of Trinidad and Tobago, 2019). The performing arts, visual arts, sports and the diverse kinds of food all evolved from the Caribbean's ICH experience. Not surprisingly the region has the distinction of producing two Nobel laureates in literature. Many of the Caribbean festivities and creative endeavours have received global recognition, and in many instances have been inscribed in the UNESCO Representative List of the Intangible Cultural Heritage of Humanity. Examples include Cuba-La Tumba Francesa-2008,³ Rumba-2016,⁴ the Festivity of Las Parrandas 2018,⁵ Punto2017,⁶ Dominican Republic-Merengue -2016⁷ and Jamaica- Reggae Music 2018⁸ (UNESCO 2019). The very nature of ICH translates into an experience representing many generations to which a price tag cannot easily be placed. Through targeted and organized policy direction, the region can safeguard and advance ICH thereby creating unique opportunities

* Elizabeth Thorne is an Economic Affairs Assistant at the Economic Commission for Latin America and the Caribbean, Subregional headquarters for the Caribbean, Port of Spain, Trinidad and Tobago.

¹ The SAMOA Pathway captures sentiments on ICH in paragraph 80:

We recognize that small island developing states (SIDS) possess a wealth of culture, which is a driver and an enabler for sustainable development. Indigenous and traditional knowledge and cultural expression, which underscores the deep connections among people, culture, knowledge and the natural environment, can meaningfully advance sustainable development and social cohesion

81 of the SAMOA Pathway refers:

In this regard, we strongly support the efforts of small island developing states:

(e) To develop domestic mechanisms to conserve, promote, protect and preserve their natural, tangible and intangible cultural heritage practices and traditional knowledge." (United Nations, SAMOA Pathway 2014)

– The 2030 Sustainable Development Agenda has no specific sustainable development goal (SDG) on ICH. There are however, SDG goals that can be translated to addressing ICH for example: SDG 4-Quality Education, SDG 8-Decent work and economic growth, SDG 11-Sustainable Cities and Communities, SDG 12-Responsible Consumption and Production. See reference at: Culture In The Sustainable Development Goals: A Guide For Local Action (May 2018), available at: https://www.uclg.org/sites/default/files/culture_in_the_sdgs.pdf

² ICH is defined as: "intangible cultural heritage (ICH) means the practices, representations, expressions, knowledge, skills – as well as the instruments, objects, artefacts and cultural spaces associated within – the communities, groups, and in some cases, individuals recognize as part of their cultural heritage. This intangible cultural heritage, transmitted from generation to generation, is constantly recreated by communities and groups in response to their environment, their interaction with nature and their history, and provides them with a sense of identity and continuity, thus promoting respect for cultural diversity and human creativity" (UNESCO 2003).

³ La Tumba Francesa – a Cuban dance, song and drumming technique introduced by Haitian slaves who settled in Cuba in the 1790s. The performance of the dance often lasts throughout the night.

⁴ The sounds, music and motions associated with Rumba has its origins in African culture with elements of the Antillean culture and Spanish flamenco.

⁵ The Festivity of Las Parrandas is a cultural competition held among eighteen communities. The competition has many categories: design and construction monumental replicas, floats, costumes, songs, dances, fireworks et al.

⁶ Punto is the poetry and music of the Cuban farming community.

⁷ Merengue is a traditional Dominican dance that is considered the core of the Dominican identity.

⁸ Reggae music of Jamaica is an amalgam of numerous musical influences, including earlier Jamaican forms as well as Caribbean, North American and Latin strains.

for its citizens to better their social and economic circumstances at the same time providing for the protection of the environment. It is critical that regional policy maker employ innovative ways of advancing this rich intangible resource. There are great opportunities for this unique Caribbean experience to enhance the region's economy in general, and its tourism product in particular. In order to protect ICH asset, due care including legislative, capacity building and sensitisation must be addressed. A Caribbean-wide effort towards this end has been the Caribbean Festival of Arts (CARIFESTA).

THE POTENTIAL OF CARIFESTA AS A PLATFORM TO SHOWCASE ICH

This year (2019) the Government of Trinidad and Tobago is hosting the Caribbean Festival of Arts (CARIFESTA) XIV under the theme “Connect, Share, Invest”, a regional cultural event.

Established in 1972, it is a showcase of different cultures of all the countries whose shores are washed by the Caribbean Sea. The festival is a culmination of many initiatives that encourage regional integration. Since its first incarnation, the festival has been hosted by eight Caribbean countries: Barbados (1981, and 2017); Cuba (1979); Guyana (1972 and 2008); Haiti (2015); Jamaica (1976); Saint Kitts Nevis (2000); Suriname (2003 and 2013); and Trinidad and Tobago (1992 and 1995) (CARICOM, 2019). This festival may have the elements to provide one of the possible platforms upon which the ICH of the region could be showcased.

The value of the festival and potential of this proposed platform was articulated by Edwin Carrington, former Secretary-General of the Caribbean Community: “CARIFESTA embodies Caribbean integration. It is here that people of the Region come together; co-mingle, creating one community, one people. That is integration. Further, this event strengthens the bonds between us, displays our creativity and ingenuity and demonstrates to the world the best that this Region has to offer. CARIFESTA celebrates our Caribbean being in a way

that no other single event can.” (Ministry of Community, Development, Culture and the Arts 2019).

The CARIFESTA model was revised in 2004 with the objective of fostering economic benefits while unifying the sub-region (Nurse, 2004). This model was geared towards creating a world-renowned mega festival which would highlight Caribbean culture and artistic expression of the highest calibre. It was envisioned as being an event that could make a valuable contribution to the evolution of the sub-regional cultural fabric.

Staged every two years, the current vision of CARIFESTA is to be a world-renowned mega festival of Caribbean cultural and artistic excellence, which triggers economic benefits, uniting the sub-region and exciting all peoples. This engagement offers further opportunities for cultural exchanges and entry into international markets. Ultimately, ICH belongs to the individual, groups and communities that are fully vested in safeguarding their knowledge base. They have the power to lobby their governments to develop policy that would promote ICH build both awareness and capacity in safeguarding ICH to ensure its continued growth and development as a viable contributor to the sustainable development of SIDS.

CONCLUSION

Looking ahead, the region must be encouraged to provide support for ICH which is in keeping with the sustainable development objectives as agreed to in the SAMOA Pathway and the 2030 Agenda.

This is because among its benefits, ICH can provide avenues for building and strengthening the creative industries and cultural tourism. In this regard such regional work as the CARIFESTA could be channelled as a regional platform to share and promote this invaluable knowledge base. ■

REFERENCES

SAMOA Pathway (cited February 2019), available

at: http://www.un.org/ga/search/view_doc.asp?symbol=A/CONF.223/10&Lang=E

UNESCO (2003), Text of the Convention for the Safeguarding of the intangible Cultural Heritage (cited January 1 2019), available at: <https://ich.unesco.org/en/convention#art2>

National Library and Information System Authority of Trinidad and Tobago, Historical Development of the Steel Band (cited February 18, 2019), available at: <https://www.nalis.gov.tt/Resources/Subject-Guide/Steelband>

UNESCO Representative List of the Intangible Cultural Heritage of Humanity (cited February 14, 2019) <https://ich.unesco.org/en/lists>

Welcome Remarks SIDS Caribbean Regional Partnership Dialogue August 6, 2018 Hon. Minister Dr. Omar Figueroa cited February 18, 2019) https://sustainabledevelopment.un.org/content/documents/27911Welcome_Remarks_Minister_of_State_Omar_Figueroa_1.pdf

The Inter-American Development Bank (cited February 18, 2019), available at: http://competecaribbean.org/wp-content/uploads/2017/08/2-CE_Caribbean_PD.pdf

Phillips, Willard, Indar, Delena and Thorne, Elizabeth (2017). An analysis of the art and craft sector and its potential for sustainable tourism development in the Caribbean. Series Studies and Perspectives No. 63. ECLAC Subregional Headquarters for the Caribbean. December.

Hendrickson, Michael and Niaah, Sonjah (2018) A study on the creative industry as a pillar of sustained growth and diversification, Series Studies and Perspectives No. 72. ECLAC Subregional Headquarters for the Caribbean, March,

CARICOM (June 2018). CARICOM fine-tuning financing mechanism for Cultural Industries <https://caricom.org/media-center/communications/news-from-the-community/caricom-fine-tuning-financing-mechanisms-for-cultural-industries-1>

Ministry of Community Development, Culture and The Arts, Who We Are (cited January, 2019) <http://www.cdca.gov.tt/who-we-are/>



THE CLME+ SAP INITIATIVE AS AN INTEGRATED REGIONAL MANAGEMENT APPROACH TO OCEAN GOVERNANCE IN THE WIDER CARIBBEAN REGION (WCR)

Lucia Fanning¹, Robin Mahon², Patrick McConney³, Laverne Walker³ and Patrick Debels³

The SAMOA Pathway recognizes the importance of coastal and marine ecosystem goods and services as the “main building blocks of a sustainable ocean-based economy” (UN, SAMOA Pathway 2014). The importance of this sector is demonstrated by the World Bank 2012 estimation where, the Caribbean’s ocean economy generated 18% of the region’s total Gross Domestic Product (GDP).⁴

Engaging with the emerging developments in the blue economy such as: aquaculture, carbon sequestration, marine biotechnology, deep seabed mining, and ocean renewable energy these changes can profoundly transform the traditional⁵ ocean-based industries of the Caribbean. For the Small Island Developing States, these resources provide food, employment, energy and recreation, and are part of our culture (Agard et al. 2007). Due to unsustainable activities such as overexploitation of living resources, pollution from land-based and marine-based sources and direct physical degradation from inappropriate development and practices, these productive capacities of coastal and marine resources and ecosystem services are being threatened (CLME Project, 2011). This complexity is exemplified when the Wider Caribbean Region (WCR) is examined and in the context of sustainable management of shared coastal and marine resources.

The WCR covers an area of at 4.4 million km² and comprises insular and coastal States and Territories with coasts on the Caribbean Sea and Gulf of Mexico, as well as waters of the Atlantic Ocean adjacent to these States and Territories. Twenty-eight Caribbean Small Island Developing States are contained in the

WCR (Debels et al., 2017). Within the WCR, the governance strategies and capacities regarding marine resources management vary considerable at national, sub-regional and regional levels. Further, an estimated 41 million people live within 10 km of the WCR- member countries coastlines highlighting the anthropogenic pressures placed on the coastal and marine ecosystem (UNEP, 2018).

The WCR as is defined under the “Cartagena Convention”⁶ for the Protection and Sustainable Development of the Marine Environment, is composed of three Large Marine Ecosystems or LMEs: These are: The Gulf of Mexico Large Marine Ecosystem, the Caribbean Large Marine Ecosystem (CLME) and the North Brazil Shelf Large Marine Ecosystem (NBLME). This vast diverse and complex marine area is a major contributor to economic, social and environment sustainable development of the WCR (Mahon et al., 2010). Given these complexities contained in the WCR in order to achieve sustainability and equity in the management of the shared resources, a long-term, intergovernmental mechanism is necessary. (See Figure 1 demonstrating the geography of the WCR).

Addressing the sustainable management of shared marine resources covering the WCR, is an ongoing Caribbean Large Marine Ecosystem (CLME+) initiative. This initiative beginning since 2002, has been applying a multilevel institutional approach to coastal and ocean ecosystem management in the WCR. It is being implemented based on the common position taken by member countries that the sustainable management of shared marine resources necessitates a regional approach and with the active engagement of governments, civil societies, the private sectors, inter and extra regional developmental partners alike. This initiative is co-funded by the Global Environment Facility (GEF) and implemented by the United Nations Development Programme (UNDP).

Supporting this requirement, the CLME+ during its second phase, developed a 10-year strategic action programme (CLME+ SAP, 2015-2025) for the sustainable management of shared Living Marine Resources in the Caribbean and North Brazil Shelf Large Marine Ecosystems (CLME+ region). The CLME + SAP, is envisioned to be a long-term iterative process engaging WCR countries, regional, sub-regional and international developmental partners, civil societies, academia and the private sectors.

¹ Marine Affairs Programme, Dalhousie University, Halifax, Nova Scotia, Canada.

² Centre for Resource Management and Environmental Studies (CERMES), University of the West Indies, Cave Hill Campus, St. Michael, Barbados.

³ UNDP/GEF Caribbean Large Marine Ecosystem (CLME+) Project Coordination Unit, Cartagena, Colombia.

⁴ Financing the Blue Economy (2018), available at: https://issuu.com/caribank/docs/financing_the_blue_economy_a_carib

⁵ The Caribbean SIDS traditional ocean-based economic are for example: fishing, coastal tourism, offshore oil and gas exploration, and marine transportation.

⁶ Cartagena Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region (March 2019), available at: <http://www.cep.unep.org/cartagena-convention>

Figure 1 - The Wider Caribbean Region^a

The CLME+ Initiative
Source CLME+ (Caribbean and North Brazil Shelf Large Marine Ecosystems) (cited March 2019) available at: <https://www.clmeproject.org/>

The CLME+ SAP is currently endorsed at the ministerial level by twenty-six WCR member countries.⁷ Additionally, there are key regional and sub-regional inter-governmental bodies actively engaged in the CLME+ SAP. Principal among these are: The Caribbean Community and Common Market (CARICOM); Central American Integration System (SICA); the Organisation of Eastern Caribbean States (OECS); United Nations Environment Programme - Caribbean Environmental Programme (UNE CEP); Western Central Atlantic Fisheries Commission (WECAFC); Caribbean Regional Fisheries Mechanism (RFM, Central America Fisheries Agency (OSPESCA); and the Intergovernmental Oceanographic Commission Caribbean Subcommission (IOCARIBE). Through the CLME+ SAP, priorities, strategies and actions required to improve the transboundary governance and management of shared living marine resources have been identified and agreed upon.

Whilst these efforts are positive developments for participatory management of shared marine

resources, there is still a long way to go for the achievement of an agreed and functioning WCR ocean management mechanism. Engagements are ongoing for the establishment of a long-term regional governance structure including: human, institutional and financial resources mobilization. In support of this requirement, in 2017 the CLME+ initiative under its third phase began working to identify options for a regional Permanent Coordination Mechanism and a strengthened Regional Governance Framework for shared living marine resources and ocean governance in the CLME+ Region, with a Sustainable Financing Plan.⁸ ■

REFERENCES

Agard, J. B. R., et al. 2007. Caribbean Sea Ecosystem Assessment (CARSEA). Caribbean Marine Studies, Special Edition 2007: 85 pp.

CLME Project. 2011. Caribbean large marine ecosystem regional transboundary diagnostic analysis. The UNDP/GEF Caribbean Large Marine Ecosystem and Adjacent Areas (CLME) Project, Cartagena, Colombia, 138 pp.

CLME Project. 2013. The Strategic Action Programme for the sustainable management of the shared living marine resources of the Caribbean and North Brazil shelf large marine

ecosystems (CLME+SAP). The UNDP/GEF Caribbean Large Marine Ecosystem and Adjacent Areas (CLME) Project, Cartagena, Colombia, 123 pp.

Debels P., et al. 2017. The CLME+ Strategic Action Programme: An ecosystems approach for assessing and managing the Caribbean Sea and North Brazil Shelf Large Marine Ecosystems. *Environmental Development*, 22: 191–205.

Fanning, L., et al. 2007. A large marine ecosystem governance framework. *Marine Policy* 31: 434–443.

Mahon, R., Fanning, L., McConney, P. and Pollnac, R., 2010. Governance characteristics of large marine ecosystems. *Marine Policy*, 34: 919–927.

Mahon, R., P. McConney, and L. Fanning, 2018. The Way Ahead for Coastal and Ocean Ecosystems in the Wider Caribbean. *Journal of Caribbean Environmental Sciences and Renewal Energy*, 1: 6-9.

McConney, P., T. Phillips, M. Lay and N. Nembhard. 2016. Organizing for good fisheries governance in the Caribbean Community (CARICOM). *Social and Economic Studies*. 65: 57-224.

United Nations. 2014. Report of the third International Conference on Small Island Developing States, Apia, Samoa, 1-4 September 2014. A/CONF.223/10

United Nations Environmental Programme (UNEP), Caribbean Environment Programme (2018), available at: <https://www.unenvironment.org/explore-topics/oceans-seas/what-we-do/working-regional-seas/regional-seas-programmes/wider>

⁷ As of February 2019, the CLME+ SAP has been politically endorsed by: Antigua & Barbuda, Bahamas, Barbados, Belize, Brazil, Colombia, Costa Rica, Cuba, Dominican Republic, France (with its 5 overseas territories of Guadeloupe, Martinique, Saint-Barthélemy, Saint Martin and French Guiana in the CLME+ region), Grenada, Guatemala, Guyana, Haiti, Honduras, Jamaica, Mexico, Montserrat (UK overseas territory), Nicaragua, Panama, St. Kitts & Nevis, Saint Lucia, St. Vincent & the Grenadines, Suriname, Trinidad and Tobago, the United States of America.

⁸ UNDP/GEF CLME+ Project (sited March 2019), available at: <https://clmepius.org/>

DISASTERS AND SMALL ISLAND DEVELOPING STATES (SIDS): WHERE GEOGRAPHY AND VULNERABILITY MEET

C) DATA AVAILABILITY

The damage caused by a disaster is one of the measures of its intensity. The periodic and consistent collection of data on economic impacts of disasters is important not only in terms of increasing knowledge on its tangible impacts, but also for future planning.

Whether it is the recurrent practice of collecting disaster data for Caribbean countries (ECLAC has done several damage and loss assessments in the region) or the exposure of the region to frequent storms, the data available on EM-DAT database for the Caribbean is much more comprehensive when compared to the two other regions, (see Table 1 on page 7). In the Caribbean, there are data available for 32 per cent of disasters, 24 per cent for the Pacific and 17 per cent for AIMS.

D) DAMAGE TO GDP RATIO⁹

This indicator demonstrates the percentage of damage in relation to the regional average GDP of affected countries per year, considering the countries that reported damage in that year.

During the 1990-2018 period, the largest average ratio corresponds to the Caribbean SIDS, 4.4 per cent, followed by the AIMS, 3.7 per cent, and Pacific, 2.8 per cent. These averages demonstrate that the recurrent impact of damages might be more severe in the Caribbean. Granted that this is a relative measure, absolute numbers give us an even better perception of how impactful storms are in the Caribbean. It is important to note that although the average for the year 2010 is high in the region due to the earthquake in Haiti, the 2017 hurricane season had a devastating economic impact in the Caribbean with

the largest recorded damage reaching more than 15 billion in SIDS alone. Moreover, nearly every year, at least one country in the region has experienced damage higher than 10 per cent of its GDP.

CONCLUSIONS

Small domestic markets, lack of diversity in the productive economic base and environmental mismanagement are common features in many SIDS which increase existing vulnerabilities and limit post-disaster recovery capacity.

Despite the geophysical similarities, not all island countries are affected by hazards in the same way. Evidence shows that despite many similarities, when it comes to disasters in all three regions, there are differences to be observed.

For the period 1990-2017, the data show that Caribbean SIDS have experienced more disasters and, specifically, more weather-related disasters, mostly storms, when compared with the other SIDS regions. Biological threats have a high frequency in the AIMS countries, whereas in the Pacific, volcanic activities, earthquakes and tsunamis pose relevant threats.

The impact on the population and on the countries' economy has also been greater in the Caribbean caused mostly by extreme weather events like tropical cyclones caused significant damage, losses and additional costs. Changes in regional climate systems are expected to aggravate the problem by increasing the recurrence and severity of weather-related hazards.

The evidence presented in this article shows that there is more data available regarding damage caused by disasters for the Caribbean SIDS. The countries

of this region recognize the importance of doing damage and loss assessments (DaLA) as tools to estimate effects and macro socioeconomic impacts of disasters.

For example, in the Caribbean SIDS review of the SAMOA Pathway in San Pedro, Belize in August 2018, Caribbean SIDS emphasized the importance of adequately supporting initiatives under the Warsaw International Mechanism (WIM) for Loss and Damage associated with Climate Change Impact. The meeting also called for support to enable countries to submit loss and damage proposals to the Green Climate Fund (GCF) and urged the international community to support CARICOM in its drive to recapitalize the Caribbean Catastrophe Risk Insurance Facility (CCRIF) as the premiere mechanism that presently addresses loss and damage, in the face of more intense extreme weather events exacerbated by climate change. ECLAC, with its long-term experience, can contribute to increasing national capacities to undertake this task.

The collection and sharing of information about disasters' economic impact presents also an opportunity for cooperation among SIDS, as countries in the Pacific and AIMS region can learn from the Caribbean experience on this matter. These cooperation arrangements to increase efforts in terms of disaster data collection, together with a multi-hazard approach to planning, should be deployed more consistently and supported with funding alternatives that allow the necessary recovery and resilience enhancement measures to be adopted in all SIDS. ■

⁹ To compare the damage in relation to the GDP for the three regions, for each year t , the damage to GDP ratio was calculated considering a weighted average of the ratio in relation to the sum of the GDP in countries that suffered a disaster that year. The weighting factor in this case is the GDP of the affected country over the sum of the GDP of all affected countries on that year.

► (continued from page 9)

RENEWABLE ENERGY: NEW OPTIONS FOR ENERGY SECURITY AND BEYOND IN CARIBBEAN SMALL ISLAND DEVELOPING STATES

As noted above, many Caribbean countries have already initiated activities towards exploiting their RE potential. Aruba, Antigua and Barbuda, Barbados, Saint Lucia, and Saint Kitts and Nevis, for example, have established utility-scale solar power plants ranging between 1 – 3MW. Jamaica is also currently constructing a 37MW solar plant which is expected to be the largest of its kind in the Caribbean. Other initiatives in solar are also underway in Barbuda, the Bahamas and Cuba (CREF Market News, 2018). Additionally, efforts are being made in the area of geothermal energy, with Saint Kitts and Nevis (Nevis), the Commonwealth of Dominica, and Saint Vincent and the Grenadines all seeking to join Guadeloupe as Caribbean geothermal energy producers in the not too distant future. Among these countries, Saint Vincent and the Grenadines is aiming for commercial start-up of a 10MW geothermal plant by 2021 (ThinkGeoEnergy, 2019), while the other countries are in various stages of project development, financing negotiation, and testing and validation.

The exploitation of wind energy is also already in place in countries such as Aruba, Curacao, and Jamaica, while mini-hydro applications have been applied in the Commonwealth of Dominica and

Saint Vincent and the Grenadines.

CONCLUSION

The Caribbean region has made significant strides towards improving its energy security status through the application of RE.

While many challenges are still to be overcome, the continuous fall in the price of RE technologies, as well as the increasing willingness of investors to engage the subregion will be strong drivers for the further development of more sustainable and greener energy sources. All of this implies that Caribbean SIDS are likely to become less dependent on fossil energy imports while strengthening their inter-sectoral relationships by reducing energy costs and leveraging other potential economic opportunities over the medium to long term. RE also offers an invaluable opportunity for Caribbean SIDS in the context of disaster risk reduction (DRR), since it allows for the build-up of a more distributed energy grid, which enhances energy resilience and redundancy in the context of disasters (Peralta and Flores, 2018).

A key issue in taking advantage of this development, however, is the shaping of the necessary regulatory and policy

framework to facilitate this transition. The recent efforts of many countries in updating their national energy policies, strongly suggest that Caribbean SIDS are well up to the task. ■

REFERENCES

- Fluence News Team, 2018 “Desalination in the Caribbean” <https://www.fluencecorp.com/desalination-in-the-caribbean/IRENA>, (2017), “RenewableEnergyinthewater,energy,foodnexus”
- Schmidt L., and Sangermano N., (2017), “The Global Transition to Renewable Energy — Can the Caribbean Lead the Way? Part 1: The Potential” <https://www.renewableenergyworld.com/articles/2017/06/the-global-transition-to-renewable-energy-can-the-caribbean-lead-the-way-part-1-the-potential.html>
- FAO, (2015), State of Food Insecurity in the CARICOM Caribbean - Meeting the 2015 hunger targets: Taking stock of uneven progress” <http://www.fao.org/3/a-i5131e.pdf>
- CREF Market News, (2018) “Caribbean Renewable Energy: Five Projects We’re Watching in 2018” <http://newenergyevents.com/caribbean-renewable-energy-five-projects-were-watching-in-2018/>
- ThinkGeoEnergy, (2019) “Saint Vincent & the Grenadines pushing forward on 10 MW geothermal project” <http://www.thinkgeoenergy.com/saint-vincent-the-grenadines-pushing-forward-on-10-mw-geothermal-project/>
- Guerra S. (2016) “Energy Efficiency Policies in the Caribbean – A manual to guide the discussion, ECLAC /GIZ 2016.
- Peralta L, and Flores A. “Enhancement of resilience to disasters and climate change in the Caribbean through the modernization of the energy sector” ECLAC, 2018.



The Magazine of the Caribbean Development and Cooperation Committee
ECLAC Subregional Headquarters for the Caribbean

PO Box 1113, Port of Spain, Trinidad and Tobago

Tel: 868-224-8000

E-mail: spou-pos@eclac.org

vrb.al/eclaccaribbean