IN THIS ISSUE:
• Trinidad and Tobago • Barbados • Manzanillo • Cartagena • Caucedo
• St. Maarten • Suriname • Caribbean Maritime Institute • Montserrat • Haiti
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A year of growth, a matter of survival
Caribbean ports expanding, upgrading, retooling

The year just expired slipped away quietly. It did leave behind a mood of uncertainty about security and governance in some places and a steady hum of bloody martyrdom and human displacement. The year of the refugee left us to ponder the complexities and inconsistencies played out in its final hours on the streets of Cologne as it did in stock markets where indicators reflected uncertainties about the Chinese economy; and, at the gas pumps where motorists sang songs of praise, while oil-producing nations like Canada, battered by market forces, wished 2015 gone.

To the contrary, on December 31, 2015, Caribbean ports were saying farewell to a year that was marked by significant achievement. Caribbean seaports and marine cargo terminals expanded, upgraded and retooled. Regionally, the Caribbean maritime sector reported a year of development and ended 2015 in better shape than at the start. And as this issue of PORTSIDE CARIBBEAN was put to press, reports out of Roseau were that Venezuela will be providing US$12.5 million for rehabilitation work on Dominica’s Woodbridge Bay Port.

St. Maarten commissioned a new harbour crane in 2015 (page 20) and the Port of Bridgetown acquired a new ship-to-shore gantry crane. For Barbados, it was a year of retooling. Cargo handling capabilities improved (page 12) with the acquisition of a number of new machines and upgraded technology. And work on Berth 5 which began on March 27 was completed at the end of October. DP World Caucedo completed major dredging operations and opened its impressive logistics centre. And, the port of Cartagena had a spectacular year (page 16), receiving and commissioning five ship-to-shore gantry cranes.

“We are experiencing a small rebirth in cruise ship calls,” said Joseph A. O’Garro, Manager of the Montserrat Port Authority as that country saw continued progress in its massive rebuilding programme (page 26) with designs for a new capital town and a new port on the drawing boards.

The reports of major work projects and development initiatives from the many ports and container terminals documented in this issue of PORTSIDE CARIBBEAN collectively define 2015 as a good year in the Caribbean’s maritime sector. And, in a region dominated by island-states whose national economies are destined, by reasons of geography, to depend heavily on the maritime sector and on marine terminals, sustaining effective and efficient ports is more than a matter of commonsense; it is a matter of survival.

Michael Jarrett
Editor
PMAC and AAPA sign pact for cooperation

The Port Management Association of the Caribbean (PMAC) and the American Association of Port Authorities (AAPA) have signed a pact clearing the way for cooperative action between both membership organizations.

The agreement, which took the form of a Memorandum of Understanding, was signed on November 4, 2015, on the final day of the AAPA's 104th annual conference at the Intercontinental Hotel in Miami, Florida. Signatories for PMAC were Chairman, Bishen John and Executive Secretary, Glenn Roach. Representing the AAPA were Kristin Decas, then Chair of the Board of Directors, and its President, Kurt Nagle.

The agreement provides a framework for both organizations to act jointly in promoting and pursuing projects of mutual interest. Specific areas of interest identified in the agreement include port development and the exchange of technology, as well as knowledge and information on design and building standards. In this regard, the agreement provides a basis for cooperation and the sharing of best practices in construction, operations and security. It sets the stage for both organizations to act jointly in cooperating with government agencies and private entities in the execution of programs, projects and activities for port development; and it creates a partnership in the development of human capital “… including appropriate technical training and personnel improvement to achieve optimal port performance.”

Other areas of interest specifically noted include:

- Port security, in ensuring the safety of passengers, crew members, vessels and port facilities
- Industrial safety, in risk prevention of all problems that impact persons, freight, or vehicles that operate within a port system, as well as in securing necessary funds for implementation of appropriate programs and infrastructure
- Environmental quality issues

Areas for mutual cooperation noted in the memorandum of understanding include:

- Coordination efforts on international issues of common concern
- Collaboration in conferences, seminars, training, technical committees
The American Association of Port Authorities (AAPA) ... the voice of seaports in the Americas

The AAPA was founded in 1912 and is generally regarded as “the recognized and coordinated voice of seaports in the Americas.” Its present Chair, elected at the 104th AGM in Miami, Florida, last November, is Canadian Jim Quinn. Quinn is president and CEO of the Saint John Port Authority in the province of New Brunswick. He succeeds Kristin Decas, CEO and port director of the Port of Hueneme.

The Association has in its membership more than 150 public port authorities in the Caribbean and Latin America, the United States and Canada. In addition, association members include corporate entities and individuals. AAPA is dedicated to strengthening the ability of member-ports to deliver services and create economic and social value for their communities. It promotes the common interests of the port community and provides support and leadership on a range of issues including trade, transportation, environment protection and other matters related to port development and operations.

It is governed by a 10-member Executive Committee and a 52-member Board of Directors. Its structure includes 12 technical and three policy committees. There are 350 individual corporate and almost 200 individual associate members on the committees.

Its headquarters are in Alexandria, Virginia, where a staff of 14 full-time, and three part-time, employees delivers the services of the organization.

The AAPA’s annual budget is approximately USD $2.7 million.

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PMAC goes to St. K

Where Caribbean tourism began more than

Caribbean tourism is said to have a total market of over 25 million people, generating economic value (measured as GDP) of about US$50 billion in 2013. Did the whole thing, as we know it today, start in Nevis?

The first hotel built in the Caribbean was completed in 1778 on a gorgeous little island across “The Narrows” from the St. Kitts shore. The spectacular beauty of the island and the people who lived there were well known. Combined with the exquisite accommodations at the new Bath Hotel, the sheer beauty of Nevis was soon attracting the famous and the wealthy. The first secretary of the United States Treasury, Alexander Hamilton, designer and founder of the financial system of the USA and chief aide to President George Washington, was born in the Nevis capital of Charlestown and would have been just past his 21st birthday when Bath opened its doors. But although called to higher service in the founding of the United States of America, Hamilton would have found reason in his lifetime to return to the therapeutic atmosphere of his birthplace. The celebrated English poet Samuel Taylor-Coleridge was among the many influential visitors who travelled oceans to seek the therapy of Nevis.
By Mike Jarrett

PMAC goes to St. Kitts and Nevis

Where Caribbean tourism began more than 230 years ago

PMAC meets on Nevis

It is on the beautiful island of Nevis, still being kept a secret by the rich and famous, surrounded by a rich and unspoiled environment, that the Port Management Association of the Caribbean (PMAC) will have its 2016 Annual General Meeting.

The PMAC secretariat announced that the date of its major conference in 2016 is June 22 to 24.

It will be held in St. Kitts and Nevis, at the Four Seasons Resort on the Pinney Estate on Nevis. Senior port managers, CEOs, owners and operators of marine ports and container terminals across the Caribbean and Latin American region will be in attendance. Hosted by the Nevis Air and Sea Ports Authority, the 2016 PMAC conference will also be attended by legal and management consultants; those who recommend or design public policy; as well as representatives of regional multi-lateral organizations.

When the rising British naval officer Horatio Nelson, later to become perhaps the most decorated Admiral in British naval history, was posted to the Caribbean, he became attracted to a young woman of Nevis, known locally as Fanny. Nelson actually married the local lass, Frances ‘Fanny’ Nisbet, a member of a local elite family, at Montpelier Estate, Nevis, on March 11, 1787, shortly before the end of his tour of duty in the Caribbean.

The island home to a small population of wonderful people, Nevis was soon the birthplace of a high-end tourism brand. This captured the attention of news media that made famous the details of who were quietly slipping in and out of Nevis. Princess Diana, following her divorce to Prince Charles, reportedly found solace in Nevis with Princes William and Harry. Names belonging to Oscar nominees and Grammy winners are often mentioned in the same sentence as Nevis, the smaller of the twin islands which comprise the country of St. Kitts and Nevis.

It is on the beautiful island of Nevis, still being kept a secret by the rich and famous, surrounded by a rich and unspoiled environment, that the Port Management Association of the Caribbean (PMAC) will have its 2016 Annual General Meeting.
April 2015 will be remembered in the history of the Port of Port of Spain for the inaugural visit of the *mv Glovis Crystal*. It was the first call by a ship from the Hyundai Glovis Line to Trinidad and Tobago but it was also the Crystal’s maiden voyage.

With onboard capacity for 6,500 vehicles, and storage facility at the Port of Port of Spain for 3,300 vehicles, the country’s port authority expects this new business relationship to increase roll-on/roll-off volumes.

Port of Spain continues to experience growth in its cruise business. Although not one of the Caribbean’s leading cruise ship destinations, the Port of Port of Spain has been receiving a fairly significant volume of cruise business. The 2014-15 cruise season (the winter months in the northern hemisphere) brought 10 cruise ship visits with 13,085 visitors to Trinidad. The schedule for the current (2015-16) cruise season has 18 cruise ship calls. A total of 15,696 passengers are expected.

Cruise lines calling at Port of Spain include MSC Cruises, Princess Cruises, Holland America, Saga Shipping Company, Hapag Lloyd, Haimark and Swan Hellenic. The *MSC Orchestra*, with passenger capacity of 2,550, is the largest ship on the schedule for the current season. Its first visit was on December 17, and it is scheduled to make a total of eight calls at Port of Spain. The *Asuka II* of NYK Cruises will make its inaugural visit to Port of Spain on February 18.

**SYSTEMS UPGRADE**
The port did not commission any new equipment or systems in 2015, but it completed very important upgrading and maintenance which resulted in improved reliability. The hoist and trolley regulators of the Port’s two oldest ship-to-shore cranes were replaced. The project involved engineering design, hardware acquisition, and commissioning. This became necessary because of the degradation of the regulator circuit boards age. This situation significantly increased the risk of failure of all crane components including motor regulators, which could have rendered these key machines inoperable.

A contract was awarded to replace the regulator with digital drives. However, wiring and installation of the drives were done by the port’s crane maintenance department, under the direction of veteran port engineers Sheldon Smith, Darren Shareef and Shazad Ali. With this major
upgrade completed, the Port of Port of Spain now has improved crane functions as the microprocessor-based digital drives will provide more effective monitoring and control of the crane motors. The replacement of the outdated electronic system with more robust technology and a new electronic, microprocessor-based system has significantly increased the safety and reliability of the operations. Improved crane safety systems and the new drive system will allow future safety upgrades.

There are other noteworthy benefits of the project. Crane diagnostics will become easier since the drive system will issue alarms, warnings and trending information. Troubleshooting time will be reduced as data (voltages, current, speed, etc.) will be stored digitally and will also be available in real time. Remote system monitoring will now be available through wireless connectivity to the drive. Access to both real time and historic data will allow technicians to forecast and avert major problems.

DEVELOPMENT
Other significant port maintenance or development projects at the port of Port of Spain during 2015 include:

• Construction of a new food court, to be completed in the first quarter 2016
• Replacement and installation of new crane rails, completed in April
• Surface repairs of the empty container yard, slated for completion in January 2016
• Paving of the storage yard at the ferry terminal, completed in October
• Surface repairs at the CARICOM wharves, completed in October

• Reconstruction of the barrel shop, in progress at year end and slated for completion in March 2016
• Reconstruction of the fast ferry guide jetty, completed in October; and
• Reconstruction of the conventional cargo guide jetty and loading ramp, completed in April

Plans for 2016 include: dredging of the basin at the Port of Spain ferry terminal and the approach channel; increased focus on customer service delivery and partnerships with all stakeholder groups; re-training and skills upgrade.

The Port of Port of Spain ended the year 2015 a far more reliable and efficient operation. Its efforts to consolidate continue into the year ahead with a significant dredging project and plans to upgrade its human resources and customer services.
Retooling is the term that best describes the year at the Port of Bridgetown as it increased its cargo handling capabilities, with the addition of a number of new machines, and upgraded technology.

The Port of Bridgetown commissioned a new ship-to-shore gantry crane in 2015 – a year that had Barbados winning awards from both the Port Management Association of the Caribbean and the Caribbean Shipping Association.

Retooling is the term that best describes the year at the Port of Bridgetown as it increased its cargo handling capabilities, with the addition of a number of new machines, and upgraded technology.

In addition to a Liebherr Panamax ship-to-shore container crane, the port acquired a Taylor 30-tonne lift-truck, two Taylor empty container handlers, five Liebherr diesel-electric straddle carriers, a pallet scanner and a container scanner.

Work on Berth 5, which began on March 27, 2015, was completed at the end of October. The work was done by local project contractors. This major project included the manufacturing of piles, slabs and beams for the quay by PRECONCO Ltd. Piling activities, creation of stone armour revetments, and the installation of additional crane rails were undertaken by Marenco Ltd. Provision of concrete and paving was completed by C.O. Williams Construction Ltd.

Berth 5, in addition to increasing the cargo and ship handling capability of Bridgetown, is expected to provide, in the short-term, enough berthing to host some of the world’s largest cruise ships, including the (mv Britannia and mv Mein Schiff 3.

Cruise and Yacht

Fifteen cruise ships made maiden calls on Bridgetown in 2015, including: Aidadiva, Anthem of The Seas, Azores, Britannia, Carnival Glory, Carnival Liberty, Celestyal Crystal, Costa Favolosa, Europa 2, Magellan, Mein Schiff 3, MSC Orchestra, Norwegian Getaway, Oosterdam and the Star Pride.

Substantial work was completed at the yacht berthing facility, Bridgetown shallow draught. This included construction of a ‘stern-to berth’ (600-foot long, eight-foot wide jetty) for 30 yachts. A building to house immigration, customs and health services, toilets, and laundry, was also constructed. Utility pedestals along with ancillary electrical and water rectification, transformer, transformer switchgear, incoming and distribution power.
supplies were also supplied and installed at the shallow draught marina facility.

Kenneth Atherley, Barbados Port Inc.’s divisional manager, corporate development and strategy, commented on the successes of 2015, stating that, in addition to the infrastructure, equipment and technology changes, significant progress was made with the Barbados Workers Union to restructure port operations. This, he said, was achieved by a full review of tasks and systems at a joint-committee level with follow-up discussion at the bargaining table, leading to agreement on staff reductions in certain areas to gain greater efficiencies. The parties have also committed to continuing discussions to further improve efficiencies in the port.

“The benefit,” he said, “will be a tighter, lower-cost operation which will also assist the port in restructuring aspects of its finances.”

“The Port of Bridgetown has made significant strides toward creating a more competitive and reliable operation, in line with relevant technologies, better labour practices, utilizing reliable equipment and greater physical berth capacity. These operational and strategic measures will certainly move the port towards greater fulfillment of the needs and expectations of customers,” Mr. Atherley stated.

<table>
<thead>
<tr>
<th>Vessel Calls</th>
<th>2013</th>
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<th>2015</th>
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<tr>
<td>Cruise</td>
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<tr>
<td>General Cargo — Deep Water Harbour</td>
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<td>448</td>
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<tr>
<td>General Cargo — Shallow Draught</td>
<td>102</td>
<td>103</td>
<td>118</td>
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<td>Cargo — Bulk Handling Facility</td>
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<td>Bulk Sugar</td>
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<td>Molasses</td>
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<tr>
<td>Cargo — Cement Plant and Other Anchorages</td>
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<tr>
<td>Tankers</td>
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<td>Other Vessels</td>
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<td><strong>1,549</strong></td>
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<td>-2.09%</td>
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Manzanillo celebrates 20 years, upgrades capabilities

Manzanillo International Terminal (MIT) celebrated 20 years of operations in April 2015, but the year just completed was significant for other reasons as well. In the second half of 2015, two new berths were brought into service and four new super post-panamax cranes were delivered. The new cranes arrived in Panama in August. The first of two new Mediterranean-style roll on-roll off (ro-ro) berths, Berth 7, was brought into service in September and the second, container Berth 8 was opened in October. MIT now offers 2,000 metres of container berths and two dedicated Med-style ro-ro berths.

With the significant upgrade in capability, MIT’s record and reputation for high-quality customer service are secure. Last year, the company implemented further improvements to its already high levels of service in the delivery of imports. Local imports are now being delivered with automatic stacking cranes (ASCs) that use radio-frequency identification (RFID) technology. The ASCs deliver containers directly onto the truckers’ chassis. This element of MIT’s service has delivered significant efficiencies, reducing times for imports delivery and increasing space availability at the terminal. MIT customers now also enjoy added resources available through its improved website.

“Shipping lines can request late gates directly online; while consignees and shippers can check the costs of operations in the terminal using our online quotations,” said Juan Carlos Croston, MIT’s Vice-President of Marketing.
In a year where many entities had declines, MIT had a marginal increase in vessel calls. Last year the terminal recorded 2,690 vessel calls, up from 2,653 in 2014. However, container cargo throughput decreased from 2.07 million teu in 2014 to 1.98 million teu in 2015. Volume decrease was attributed to weaker national economies in the region and the economic slump in China.

The year ahead is not likely to show significant upturns in the region as global economic trends continue into 2016. MIT’s projections for 2016 suggest that container volumes at the terminal will be similar to 2015, unless of course there is a dramatic upturn in regional economies. Estimates show that MIT will experience the effects of the Panama Canal expansion, with regard to container volumes, by 2017.
Cartagena has successfully sustained high performance standards and, for the seventh time, won the Caribbean Shipping Association’s award for best container terminal in the region.

The port of Cartagena had a spectacular year of growth and development in 2015. The port received five ZPMC Super Post Panamax ship-to-shore (STS) gantry cranes in August 2015. Those cranes went into service in October.

Another significant achievement for the year 2015 was the completion of the second phase of expansion of the port’s access channel. The channel now has a depth of 20.5 metres and has been widened to 140 metres, giving the port the capability to handle New Panamax (NPX) vessels.

A new set of last-generation buoys, powered by solar panels and equipped with AIS (automatic identification system) and GPS (global positioning system) has been acquired. The reefer yard has been upgraded to 2,780 slots and the International Logistics Support Centre (ILSC) has been expanded to 23,000 square metres.

The spectacular growth and expansion of capability at Cartagena in 2015 was matched by a significant increase in cargo handling. The three terminals in the Bay of Cartagena (SPRC, Contecar and Muelles El Bosque/Compas) handled more than 2.6 million teu during the year, an increase of approximately 9.4% from 2014. Total vessel calls also increased significantly (approximately 6.1%) to 2,625.

The port continued to deliver high levels of operational efficiency and high liner shipping connectivity. Cartagena has successfully sustained high performance standards and, for the seventh time, won the Caribbean Shipping Association’s award for best container terminal in the region.

This development thrust has continued into 2016. The SPRC and Contecar terminals are developing infrastructure in order to effectively handle NPX
container ships. Development projects, including the new Andalucía terminal on the Magdalena River, ILSC (logistics centre) and upgrading and expansion of reefer facilities, place Cartagena in a position to improve on an admirable record of growth and development.

The port is also, wisely, applying better environment-protection practices and has adopted a corporate strategy to use electric-powered equipment.

**DEVELOPMENT PLANS**

The immediate future will be a challenge for all ports in the region, but Sociedad Portuaria Regional de Cartagena is already in a state of readiness. It is prepared for the inauguration of the Panama Canal’s new set of locks and looking forward to receiving 12,000 teu ships.

Plans for the immediate future include development of refrigerated warehouses and guaranteed cold chain infrastructure for perishables. After expansion of the reefer yard, this will be the second step in the port’s strategy to establish Cartagena as a hub for refrigerated cargo.

Access and security measures will include development of automatic entrance and exit gates for trucks, complete with loud speakers, microphones, identification scanners, Optical Character Recognition (OCR) technology and automatic Equipment Interchange Receipt (EIR) systems.

The container yard is to be expanded for a total annual capacity of 5.5 million teu (to be completed by 2018).

A new cargo inspection area, with x-ray scanners and state-of-the-art technology will ensure that the port has the tightest security available for marine terminals.

Development of the river terminal, the first operational phase of which is set for completion by the end of 2017; and acquisition of container barges (with an annual capacity of 40,000 teu) will effectively connect the port of Cartagena to Colombia’s inner cities.

The acquisition of four additional ship-to-shore Super Post Panamax cranes will bring the total number of STS cranes to 20 units; and, the addition of 30 rubber-tired gantry cranes (RTGs) by the year 2018 will bring the fleet of these machines to 85 units by 2018. Development of a second access channel, enabling higher accessibility of maritime traffic is also being planned.

Cartagena is geared and ready for the challenges ahead and is bent on consolidating its claim as the transshipment hub of the Americas.
DP World Caucedo is “new canal ready.” Last year the Dominican Republic’s world-class marine terminal and free zone completed major dredging operations and opened its logistics centre. In maintaining its capability of handling the largest ships afloat, the company dredged the original port basin down to 15.2 metres. Draft is now 14.5 metres. Staying ahead of the game, DP World Caucedo has done further dredging, down to 17 metres, as it prepares for future development and construction of a 400-metre lateral berth.

The Caucedo Logistics Centre (CLC) was opened during the past year and immediate demand for space was quite high. Available space in the first warehouse has already been leased. This is one of the first ports in the Caribbean region to have a logistics centre sited securely within the port area.

Having copped the Caribbean Shipping Association’s award for productivity and efficiency in 2014, DP World Caucedo has carefully maintained its record of world class port services, established with the arrival of its first ship, mv CMA-CGM Colombie, in December 2003.

“We are new canal ready,” said Hector M. Tamburini, the terminal’s Senior Manager Commercial in disclosing plans for 2016 and making reference to the expanded Panama Canal.

Further development of the CLC will continue with the construction of more warehouses to reach the target of 14 in total. The reefer (refrigerated containers) repair unit is to be established within the port area to enable container leasing companies and carriers to do in-transit and pre-trip repairs.

Work on the new 400-metre berth, to be completed by late 2017 or early 2018, will also begin in earnest."We already have the environmental licenses and construction permits," Tamburini said.

LOGISTICS

“As for the Caucedo Logistics Center, our key message to companies distributing their products..."
in different parts of the region has been the potential savings and enhanced efficiency of their supply chain resulting from the combination of port plus warehousing operations on a single site. This allows them to set up a centralized hub that will cut back on lead times and reduce logistics inconveniences, allowing them to better serve their markets,” said Carlos Flaquer Sales & Marketing Manager of the CLC.

“Port Centric Logistics is a growing trend in supply chain management, helping to make better use of the multimodal capabilities at hand and making the supply chain more effective and flexible for any shift in demand. The CLC offers precisely that, with more than 14 planned warehouses of approximately 10,000 square metres and 10 metres in height. The first one is already built and committed, with more than 377,000 square-metres of available space. We are striving to become the ideal logistics platform in the region,” he stated.

DP World Caucedo is located in Punta Caucedo, Dominican Republic, 25 kilometres from the capital city of Santo Domingo. The port’s main economic driver is the combination of land, air and ocean transportation. This projects the Dominican Republic as a strong competitor in regional and international markets. Caucedo is part of parent company DP World’s global portfolio of marine terminals. With more than 65 terminals on six continents and sub-continents, DP World is a global leader in marine terminal operations, terminal development, logistics and related services. The company is involved in new development projects in India, Africa, Europe and The Middle East.

The culture and corporate philosophies of DP World have been the foundation of the development successes being recorded by DP World Caucedo in the Dominican Republic, in the city where the first European settlement in the new world was established more than 520 years ago. •
The most significant development in St. Maarten in 2015 was the acquisition and commissioning of a new port crane — the largest mobile crane in the north eastern Caribbean. The Terex Gottwald Model 6 mobile harbour crane arrived at the Dr. A.C. Wathey cruise and cargo facility at the end of August, and the commissioning process was completed on October 15th. The purchase was financed by RBC (Royal Bank of Canada). The 14-year old HMK 260E Gottwald (referred to as Crane 1), which the Model 6 replaced, was sold to a group in Mexico by broker Pacific Handling Systems Inc.

The new crane and the additional Bromma spreaders will bolster Port St. Maarten’s 24/7 operations, allowing continued expansion of cargo-related activities. With a reach of 51 metres and load capacity of 125 tons, the new crane will provide the capability needed to achieve growth targets.

The cargo section at Port St. Maarten provides a large part of its revenues and the port’s CEO, Mark Mingo, has indicated that the emphasis for 2016 will be on efficiency in port operations. “More focus will be placed on operational excellence and finding the right balance between operational costs and revenues,” Mr. Mingo stated. “In 2016 Port St. Maarten will be placing more focus on the transshipment segment and closing strategic agreements with the cargo principals. More investments will be made to enhance the transshipment segment and improve vessel turnaround time.”
If efficiency and cost savings are his priorities, then the new crane will certainly facilitate the process. The Terex Gottwald Model 6 is a high-performance unit. It can work ships up to post-Panamax and Capesize Bulker class and is equipped with the technical and ergonomic features required to improve productivity. Port St. Maarten crane staff is already trained in using the new crane.

In recent years, Port St. Maarten has made significant investments in the cargo side of its business. Infrastructure development, dredging, equipment upgrading and staff training have been its main focus. It now has six nationals certified as operators and supervisors. These investments have produced steady growth in container business making the port a regional sub-hub for the north eastern Caribbean.

The year in review for 2014-15 saw an increase in cargo vessel calls of 7%, (from 1,120 in 2014 to 1,198 in 2015); while container throughput increased by over 15%, (from 82,648 teu in 2014 to 95,190 teu). Port St. Maarten serves Anguilla, Montserrat, St. Kitts and Nevis, and Antigua and Barbuda. The port is also in the process of developing what has been described as “a special relationship” with Saba and St. Eustatius to include port handling, operations, economic development and sustainability. Both those Dutch islands presently receive cargo shipments and port services from St. Maarten.

THE YEAR AHEAD
Beginning this year, Port St. Maarten will continue to place emphasis on operational excellence, as indicated by Mr. Mingo. This will require additional investments. A revised Cargo Master Plan (for better property/asset utilization), that will further improve the flow of cargo and overall efficiency, is already being developed.

A spare parts module is to be launched as part of the port’s Global Logistic System. This will allow the cargo facility management to have better control over parts, purchasing and record-keeping.

The recent acquisition of the latest model Terex Gottwald Model 6, and the phasing out of the old crane, is an important element of the development plans now being implemented.

At the start of 2016, the port of St. Maarten was already reporting higher levels of productivity. •
The year just ended saw significant improvement at Suriname’s main port complex at Paramaribo. The Suriname Port Management Company (N.V. Havenbeheer Suriname) completed a major expansion in 2015 of its Nieuwe Haven facility, bringing into service an additional 20,000 square metres of new container yard space. This new space is already making a significant difference to port operations, allowing for greater efficiency in movement and physical organization.

The port also increased its container handling capability during the year, taking possession of a Liebherr LHM 280 harbour crane (84-ton lift capacity). This unit raises the number of harbour cranes at the Nieuwe Haven port to four. Together with the three Gottwald mobile harbour cranes, in operation since 2010, the new crane gives Paramaribo a much higher level of dependability and ship-handling capability.

The port management company also took initiatives to upgrade its information technology (IT). Experion Global, a software products and services firm headquartered in India, has been contracted to implement a new port IT system to support the work of the port management company and to establish capability for electronic exchange of trade-related documents and information. This new capability is envisioned as the foundation for an effective port community system that will ensure an efficient flow of data between public and private stakeholders within and outside the port.

N.V. Havenbeheer Suriname has decided to take a different approach in order to develop the potential market for the country’s bulk exports, especially round logs, wood products, natural stone and boulders. In this regard, the port is working towards establishing a dedicated mooring facility in the south of the Nieuwe Haven terminal.

N.V. Havenbeheer Suriname established contractual relationships with a number of suppliers of auxiliary services to ships during 2015. In this regard, the port now has additional capabilities, through its contractors, to deliver: port reception services (waste management, for example), potable water, ship supplies, bunkering services, certified inspection, and repair and maintenance of containers. It has also established an “empty depot.”

The progress made in 2015 reflects a continuation of initiatives and high levels of customer service in 2014 that earned the port of Paramaribo’s Nieuwe Haven terminal the Caribbean Shipping Association’s award for Best Multipurpose Terminal.

Plans for the current year, 2016, include maintenance dredging alongside the Nieuwe Haven quay; construction of a special mooring facility for development of bulk exports trade and to accommodate services in support of offshore oil exploration. Plans for 2016 include maintenance dredging alongside the Nieuwe Haven quay; construction of a special mooring facility for development of bulk exports trade and to accommodate services in support of offshore oil exploration.
the development of export-related industries. In this regard, the port is positioning itself to support the development initiatives of the Surinamese government. “There is expertise within our port management to support the development of the industrial function of the port according to the plans and objectives of the Surinamese government,” stated Andreas Talea, Managing Director of the Suriname Port Management Company.

Upgrades to and expansion of the reefer station, which started in 2014, are slated for completion in April 2016. There are also plans for upgrading storage at the Port of Nieuw Nickerie in the west of Suriname. Presently that facility is of little support for economic development in that part of the country and therefore plans include expanding accessibility via the Nickerie River to support growth and development of the country’s agricultural, forestry and mining sectors.

Although there was a 27% increase in the number of general cargo ships handled at the port in 2015 (70 as compared with 55 in 2014), the year showed a decline in total vessel calls of just under 16%, from 1,116 arrivals in 2014 to 941. Arrival of container ships declined by only 7%, (297 last year, 319 in 2014) however, arrivals of schooners and bunker ships declined by over 30% in the year under review.

<table>
<thead>
<tr>
<th>Paramaribo</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Total Vessel Calls</strong></td>
<td>1250</td>
<td>1116</td>
<td>941</td>
</tr>
<tr>
<td>Container ships</td>
<td>290</td>
<td>319</td>
<td>297</td>
</tr>
<tr>
<td>Schooners</td>
<td>321</td>
<td>325</td>
<td>221</td>
</tr>
<tr>
<td>Bunker</td>
<td>277</td>
<td>197</td>
<td>138</td>
</tr>
<tr>
<td>General Cargo ships</td>
<td>59</td>
<td>55</td>
<td>70</td>
</tr>
</tbody>
</table>
The Caribbean Maritime Institute (CMI) ended the year 2015 poised for a major transition in its status. A draft parliamentary bill which would create legislation to transform the institute into a university was finalized and has been submitted to the Jamaican Legislative Committee of Cabinet.

This means that the institution, which started as the Jamaica Maritime Institute before expanding its programmes to become a Caribbean institute, is now well advanced in its objective of becoming a full-fledged maritime university. With ISO certification and international endorsement from global partners already in place, the CMI is on course to become the Caribbean Maritime University (CMU) as soon as both houses of the Jamaican parliament approve the bill, and the country’s Governor General signs it into law.

**RECORD ENROLMENT**

The CMI had a year of record enrolment in 2015, with the highest number of students enrolling in programmes across its three schools – the School of Academic Studies (SoAS), the School of Advanced Skills (SAS) and the School of Marine and Professional Studies (MPS). Approximately 2,900 students were registered during the year. The Logistics and Customs disciplines had the highest intakes.

The School of Academic Studies, with more than half of the CMI’s total student population (55%), delivers the Associate Degree, Diploma, Bachelor and Master’s Degree programmes, and spearheads general research-based activities.

The school of Marine and Professional Studies has 30% of the student population and delivers the core seafarers STCW 95 IMO courses – preparing officers for...
shipboard employment up to the levels of captain, chief engineer and chief mate.

The School of Advanced Skills concentrates on competency-based training to meet the needs of the growing shipping and logistics sectors, including: alternative energy, engineering projects, business development, entrepreneurship and the Career Advancement Programme (CAP). It caters to about 15% of CMI’s student body.

The comprehensive program offerings include:

• Postgraduate diploma: Logistics and Supply Chain Management
• Diploma: International Shipping and Logistics
• Associate degree: A.A.Sc.: Industrial Systems Operations and Maintenance

The CMI also offers a number of customized (on demand) courses for public, private and international membership organizations including the Caribbean Shipping Association, and the Port Management Association of the Caribbean.

INFRASTRUCTURAL DEVELOPMENT
Supported by generous grant funding from the Universal Service Fund (USF), the CMI has completed installation of a suite of simulators and a 125-kilowatt solar energy system. The simulators are state-of-the-art, multi-functional equipment. In addition to curriculum courses, they also facilitate upgrade training for the current labour force. The solar energy system generates stable, renewable energy to support the simulator centre. CMI and Future Energy Corporation, suppliers of the technology, officially unveiled the facilities on June 2, 2015.

CONTRIBUTION TO REGIONAL DEVELOPMENT
The technical and academic expertise of CMI was of tremendous benefit to the Caribbean Examination Council in its introduction of Logistics as a subject area in the Caribbean Advanced Proficiency Examination (CAPE) for secondary level (high school) students across the Anglophone Caribbean. The CMI faculty - led by Dr. Ibrahim Ajagunna, Director of the SoAS and including Dr. Karen Adair, Head of Customs, Processes, Freight Forwarding and Immigration; and Quality Assurance Manager, Dr. Violet Wright – developed for CAPE the Logistics and Supply Chain management, Unit 1 and Commercial Shipping, Unit 2 courses. Training for delivery of these courses included capacity building in Trinidad, Antigua-Barbuda, Guyana and Jamaica. A bank of examination questions was also established.

The CMI has indicated that it will continue in 2016 to maximize the use of limited resources through greater operational efficiency, reduce energy costs, and continue efforts to attain a greater level of self-sustainability. All things being equal, it is the year when the Caribbean Maritime University becomes reality.
As Montserrat continues its extensive rebuilding program following the devastating eruptions of the long-dormant Soufriere Hills volcano, which destroyed its capital city Plymouth, encouraging signs of a rebirth in its shipping industry continued in 2015.

Ship calls in 2015 were 308, up from 295 the previous year and 269 in 2013. There was a marginal decline in cargo vessels calling in 2015 (193 as against 195 in 2014). However, last year, Montserrat received six cruise ship calls, compared with three in 2014 (and five in 2013). The arrival of luxury yachts increased by 15%, however, with 478 visits in 2015. Over the last two years, luxury yacht arrival in Montserrat increased by more than 50%.

Montserrat is perfect for small ‘boutique’ cruise vessels and, increasingly, lines that operate those ships are slotting in the island made famous by the devastation caused by the pyroclastic flows from the Soufriere Hills.

### MONTSERRAT

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL SHIP CALLS</td>
<td>269</td>
<td>295</td>
<td>308</td>
</tr>
<tr>
<td>Cargo ships</td>
<td>217</td>
<td>195</td>
<td>193</td>
</tr>
<tr>
<td>Cruise ships</td>
<td>5</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Other ships</td>
<td>47</td>
<td>97</td>
<td>109</td>
</tr>
<tr>
<td>Yacht visits</td>
<td>316</td>
<td>415</td>
<td>478</td>
</tr>
</tbody>
</table>

“We are experiencing a small rebirth in cruise ship calls,” said Joseph A. O’Garro, manager of the Montserrat Port Authority. “In particular the Windstar Cruises mv Star Legend began calling in early December and has 14 calls scheduled over the current season. Montserrat is also listed in their 2016-17 season itinerary.”

“It’s a neat new stop,” Windstar’s CEO Hans Birkholz reportedly told cruise writers early last year at the annual Cruise Shipping Miami conference in Miami Beach, Florida. He was quoted in USA Today as saying: “People are coming back. Montserrat is back, alive.”

Birkholz said that, previously, Windstar ships sailed past to allow passengers to see the lava flows from the
Soufrière Hills volcano and to witness the destruction that it was causing. Now, he said, “… we’re going to stop there for the day and people can see what’s going on.”

The *mv Serenissima* has also begun calling, having made two visits so far with a further two visits scheduled over the current season, O’Garro stated.

With the construction of a new capital town at Little Bay underway, it has become increasingly clear that recovery from the devastation of the country’s economy, an island state, will have to be led by maritime development and effective port operations. This reality is well-recognized by the country’s port authority. Mr. O’Garro indicated that the search for and evaluation of an integrated port management system to replace the current software was progressing in earnest, and that the 2016 operational plan reflected the importance of strengthening the port’s ability to administer its responsibilities. This, he noted, included training in hydrography.

Meanwhile, there are a number of projects now underway. The layout of the commercial offices and access to the warehouse are being reviewed in an effort to improve the flow of customer pedestrian traffic. The passenger terminal at Little Bay is being upgraded with a walk-through metal detector and expanded security camera coverage. Internal furniture is being added as well as additional covered waiting areas for the ‘non-travelling’ public.

The revetment of a river course that adjoins port property will provide long term protection of the container park’s concrete apron. This initiative, Mr. O’Garro explained, will protect port asset, improve drainage, and also provide for better outdoor lighting using LEDs.

“Our most significant project, the development of improved port infrastructure, is in the process of being reviewed,” he said. “Exciting progress has been made in that new concepts presented so far are more flexible and modular while still ensuring that the current and future needs of the port can be met in a cost-affordable fashion. Construction timeframes have also been drastically reduced.”

**Montserrat is perfect for small ‘boutique’ cruise vessels and, increasingly, lines that operate those ships are slotting in the island made famous by the devastation caused by the pyroclastic flows from the Soufriere Hills.**

The *mv Star Legend* at Montserrat. Photo courtesy Montserrat Port Authority
The numbers flooding international media in the wake of the earthquake that levelled Haiti in January 2010 gave the world snapshots of its tragic toll: more than 200,000 people were killed; 1.5 million left homeless; 19 million cubic metres of rubble and debris carpeting capital city Port-au-Prince (enough to fill a line of shipping containers stretching end-to-end from London to Beirut). They also inspired another staggering figure – the swell of foreign aid, some $13.5 billion USD, that would be injected into the country to help it rebuild.

Local initiatives were quick to react to the horrific quake. Within six months of the North Pier at Haiti’s publicly owned Port of Port-au-Prince (the Port) being damaged, Opérateurs Portuaires Réunis – a group of private operators providing cargo handling services to the Port – installed three floating piers, which re-established berthing and handling capacity to pre-earthquake levels.

In the six years since the January 12, 2010 catastrophe, a project within the country’s borders, born of a unique partnership between government and business, has yielded a

“The Logistics Hub is located at the heart of the earthquake stricken area of the city and its launch will contribute to the revival and reconstruction of downtown Port-au-Prince.”

Alix Celestin
Director of National Port Authority
headline-worthy result effort of its own. One rooted in recovery and hope.

Caribbean Port Services (CPS), a privately-held entity of shipping agents and terminal operators that has been an investment and development partner of the Port for more than three decades, introduced in December 2015 the Logistics Hub of Haiti. This sprawling, two phase development complements the rebuilding of the Port’s earthquake-battered North Pier. It includes a state-of-the-art Port-au-Prince Container Terminal (PAPCT) and the adjacent La Saline Free Zone (a designated area of little or no taxation, in close proximity to a supply chain that encourages economic activity).

The logistics hub represents the CPS’s commitment to the Port’s future and builds on its support in the past. To the layperson, the importance of restoring the Port’s functionality, in the wake of a near complete annihilation of a city, may not be immediately apparent. Until one considers its role in the overall country’s economic recovery; in 2015, the Port held a 91.5% share of Haiti’s total container volume and employed more than 1,000 people — its successful repair and expansion would be for the greater good of the nation, a sentiment shared by National Port Authority director, Alix Celestin.

“The Logistics Hub is located at the heart of the earthquake-stricken area of the city and its relaunch will contribute to the revival and reconstruction of downtown Port-au-Prince.”

The scope of the hub project in terms of brick, mortar, piles and cranes, provides testimony to how it will help reconstruct Haiti’s capital city. This one-two punch of the modern PAPCT and the La Saline Free Zone will attract more business, thus raising local GDP. Other aspects of the project focus on the people of Port-au-Prince, beyond creating opportunities for them to earn a steady pay cheque. Within the free zone, the tens of thousands of residents in the surrounding, and impoverished, Wharf Jérémie and downtown Port-au-Prince neighbourhoods will find such essentials as potable water, a reliable power source, modern housing, health care, schooling and opportunities for leisure — all part of a conjoint project with the state.

By investing in a world-class logistics hub, CPS and the Port are taking advantage of Haiti’s central location within the Caribbean — as well as its proximity to the Panama Canal — to turn it into a crucial link on an international logistics chain. With an expansion plan already in the works for 2025, the hub, and the partnership between CPS and the Port that has made it possible, has the potential to create thousands of jobs, grow Haiti’s GDP and spur economic growth for decades to come.

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2 [www.npr.org/sections/goatsandsoda/2015/01/12/376138864/5-years-after-haiti-s-earthquake-why-aren-t-things-better](http://www.npr.org/sections/goatsandsoda/2015/01/12/376138864/5-years-after-haiti-s-earthquake-why-aren-t-things-better)
3 The Logistics Hub of Haiti: PDF report provided by Caribbean Port Services (pages 17, 12)
Regulating the Jamaica Logistics Hub

Laying the foundations

BY DENIECE AIKEN

The Jamaica Logistics Hub project promises great benefits. Posited as a strategy for growth and development, the project is expected to transform the country’s national economy over a 10-year period, and is aimed at positioning Jamaica to complement Singapore, Dubai and Rotterdam in the global logistics network. The said project encompasses a number of elements, including some structural and organizational developments that should affect the entire transportation sector of the country.

PORT CONCESSION AGREEMENT

Central to the operation of the logistics hub is the port, which plays an important role in the global production and consumer chain. The establishment of the logistics hub is associated with the exploitation of resources, attraction of foreign direct investment, introduction of technology and institutional reform. An estimated 90% of the world’s commodity trade is transported by sea, hence port development is the most palpable initiative within the logistics hub venture; the accomplishment of which, must be in full conformity with national and international maritime and environmental legislation and regulations.

In April 2015, the Port Authority of Jamaica entered into a long-term Concession Agreement with CMA-CGM, a French shipping line with a fleet of approximately 428 vessels. The agreement will finance, expand, operate, maintain and transfer the Kingston Container Terminal. One of the main activities to be carried out by the Concessionaire is the dredging of the access channel into the Kingston Harbour. This will allow Kingston to receive larger vessels. Although there are benefits to be derived from this development, there can be negative consequences such as damage to the environment if the process is not properly regulated and or managed.

INTERNATIONAL REGULATORY FRAMEWORK

There are a number of international conventions which address or impact port development and activities.

Equal treatment and reciprocity

Jamaica is a member of the United Nations and, through this membership, has adopted the Convention and Statute on the International Regime of Maritime Ports and its Protocol of Signature 1923. This convention provides for freedom of access and navigation in all maritime ports and the principles of equality in the reception and treatment of vessels at ports of call. The notion of equality and equal treatment was also embedded in the United Nations Convention on the Law of the Sea (UNCLOS) 1982, to which Jamaica is a party. Interestingly, it was signed in Montego Bay, Jamaica in December, 1982.

Article 131 of UNCLOS states: “Ships flying the flag of land-locked states shall enjoy treatment equal to that accorded to other foreign ships in maritime ports.” It therefore confers a duty on the Port Authority to ensure that the interests of the country are pursued in adherence with the relevant regulations.

The Port of Kingston, well-known for its transshipment operations, may seek to give priority berthing to vessels with cargo destined for other ports over ships with domestic cargo. However, this may be considered discriminatory and a breach of the 1923 Convention.

Limitation of shipowners’ liability

A sui generis feature of maritime law is the shipowners’ right to limit their liability for loss or damage through the nautical fault defence. This defence was eliminated in the United Nations Convention on Contract for the International Carriage of Goods Wholly or Partly by Sea (“Rotterdam Rules”) 2008, however, this convention is not yet in force. The Convention on Limitation of Liability for Maritime Claims (LLMC) and its subsequent protocol, however, to which Jamaica is a party, allows shipowners the right to limit their liability in respect of claims arising from damage caused by them, and this right to limitation of liability may result in subsequent liability on ports in the event of un-claimable damage.

Liability for oil pollution damage in ports

Jamaica is also party to the International Convention on Civil Liability for Oil Pollution Damage 1992 (CLC) which conferred strict liability on shipowners for oil pollution damage. This convention created a system of compulsory liability insurance on said shipowners for their vessels. There is, however, an entitlement to limit the liability to an amount linked to the tonnage of the vessel. Oil spills from vessels occur through routine operational procedures or an accident (such as a collision, stranding, or fire). Clean up costs and liability may vary according to the cause of the spill and the extent of the pollution damage and may adversely affect the port.

Port state jurisdiction

The Memorandum of Understanding on Port State Control in the Caribbean Region (CMOU), to which Jamaica is a signatory, was signed in February 1996. Guided by the Paris Memorandum of Understanding that established the concept of port state control, the CMOU acts as a catalyst for the advancement and development of maritime administrations. Port State Control (PSC) involves the inspection of foreign vessels in other national ports by Port State Control Officers or Inspectors, for the purpose of verifying the competency of the officers on board the vessel, and that the condition of the vessel and its equipment comply with the international standards and regulations. PSC was introduced to facilitate and support flag States — being those States under whose laws a vessel is registered.
in the execution of its duties as outlined in Article 94 UNCLOS – and aims at eradicating sub-standard shipping in the Caribbean and globally.

These conventions affect the functions of a country’s port and terminal operations and due regard must be given to the effects of the stated provisions on the State’s present and future infrastructural and legislative development.

LAW REFORM

The Government of Jamaica, through its relevant agencies, has laudably embarked on a pursuit of law reform through repeals of, and amendments to, various archaic laws. The recently passed Special Economic Zones Act 2015, has repealed the Jamaica Export Free Zones Act and makes provisions for regulating, supervising, managing and controlling the Special Economic Zones (SEZs) in Jamaica, through the SEZ Authority (a statutory body established by Section 5 of the SEZ Act). The SEZ Authority holds a number of powers. These include, but not limited to, the power to allow the establishment of general or specialized zones, limited to specific economic maritime or aviation related activities; such as dry docking, bunkering, aircraft maintenance and repairs of tank farms (Sections 18, 24).

The Port Authority of Jamaica (PAJ) Bill tabled in 2013, if passed, will repeal the Port Authority Act 1972, the Harbours Act of 1874, the Harbour Fees Act of 1927, and the Harbour Lights and Lighthouses Act of 1900. It addresses, to a large extent, the functions and powers of the Port Authority of Jamaica in regulating the country’s ports, harbours, and related activities. Section 6 of this bill outlines the powers of the port authority including conserving, maintaining and improving harbours, navigational aids, and port facilities.

Another Bill, entitled The Customs (Amendment) Act 2015, is also currently pending and aims at facilitating the Jamaica Customs Agency’s adherence to international standards and best practices. It provides a framework for the efficient movement of goods through the ports in a logistics-centred economy.

Despite the fact that a majority of the laws are still undergoing reform, it must be noted that some pertinent provisions that are in accordance with the international conventions forming part of the country’s international regulatory framework, remain outstanding. The regulations related to the port and port operations are supported by the Shipping Act of Jamaica 1998, an extensive Act of Parliament aimed at giving effect to the International Maritime Organization conventions to which the country has ratified or acceded. There are still, however, evident gaps in the law.

• Neither of the amendment legislations nor the Shipping Act, which should entail provisions of the International Convention of the Prevention of Pollution from Ships (MARPOL 73/78), addresses the matter of oil pollution from ships and the effects of the entitlement to the limitation of liability of the shipowners.

• None of the regulations addresses the processes involved in the carriage of goods by sea, particularly the issue of liability of the carrier for damage to goods in line with the international regulations.

• Despite the submission of position papers for the amendment of the Natural Resources Conservation Authority Act and the Wildlife Protection Act in March 2015, there remains no imminent perceptible plan for the revision of the environmental laws and regulations.

Singapore’s success as a global logistics hub has been attributed greatly to the country’s legal reform process. Jamaica has impressively begun to lay a foundation for improving and solidifying the maritime legislative and regulatory framework and continued progress along this path will ultimately lead to the successful implementation of its logistics hub.

*Deniece M. Aiken BSc LLB MSc (Maritime Law & Policy) is an Attorney-at-Law; a Senior Lecturer (Maritime Law); a member of the Board of Directors of the Caribbean Maritime Institute and the Jamaica Maritime Institute Trust Fund; and a member of the International Maritime Lecturers Association.

“Jamaica has impressively begun to lay a foundation for improving and solidifying the maritime legislative and regulatory framework and continued progress along this path will ultimately lead to the successful implementation of its logistics hub.”
Nicaraguan government: ‘Canal not a dream, a necessity’

BY CANUTE JAMES*

The delay in the start of construction of Nicaragua’s controversial USD $50 billion Grand Interoceanic canal has raised more doubts over the feasibility of the project. Nicaragua maintains the venture — a 500-year-old dream entertained at various times by the Spanish and the Americans — is viable and that it will be commissioned, but perhaps not by its December 2019 target. The project is an important element in its national economic policy and will benefit the region, Nicaragua argues.

The canal venture is the latest effort by Nicaragua to give a fillip to its economy — one of the weakest in the Americas. It will not bring the country into disputes with its neighbours, as have earlier efforts that were intended to relieve the country’s dependence on imported energy. Nicaragua has been in contentious border issues with neighbours — mainly Colombia and Costa Rica.

The International Court of Justice (ICJ) determined in December 2015 that Costa Rica has sovereignty over a small patch of wetlands on the river San Juan on the border with Nicaragua, and which Nicaragua had claimed. The land — called the Isla Portillos by Costa Rica and Harbour Head by Managua — has been one cause of tension between the countries. Nicaragua is accepting the verdict of the ICJ, deputy foreign minister César Vega said. Nicaragua is awaiting another ruling by the ICJ over its Pacific maritime border with Costa Rica. Costa Rica has objected to Nicaragua concluding hydrocarbon production-sharing agreements with British and Norwegian firms that San José claims are in its territory.

Nicaragua gained in a dispute with Colombia when the ICJ ruled in November 2012 on a dispute over maritime territory that has been under Colombian control since 1819. The court reaffirmed Colombia’s sovereignty over San Andres and other Caribbean islands but said Nicaragua had the right to territory that had been previously considered both countries’ maritime border. This has allowed Nicaragua to proceed with agreements with US firms for hydrocarbon prospecting off its Caribbean coast.

NICARAGUA’S CHANCE

These efforts and the move to realize the dream of the canal are part of the plan by President Daniel Ortega to lift the weak economy out of protracted slow growth and stagnation. Nicaragua is hoping the 276-kilometre canal will position the country as a larger and more modern alternative to the Panama Canal, the major transit route between the Atlantic and Pacific oceans. Plans include two ports, an international airport, a power station and a cement factory.

“The Americans had once planned a canal in Nicaragua, but had built it in Panama instead,” Ortega said in defence of the project. “Now it is Nicaragua’s chance to see its dreams fulfilled. The country was very poor and with poverty and economic dependency there can be no sovereignty.”

The government argues the project will “bring huge benefits to the Nicaraguan people as well as meeting the need of international maritime industry for a more economic interoceanic route that can handle the largest ships now being built.”

The start of construction of the canal has been delayed by a year to “late 2016,” Hong Kong-based infrastructure developer HKND said, adding that the project’s design is being “fine tuned.” Although HKND has not given a new schedule for commissioning, it is likely it will miss the original December 2019 target.

The government has not commented on reports that the project’s viability has been made uncertain by losses suffered in the collapse of the Chinese stock market by HKND chairman and chief executive Wang Jing. Wang established HKND in August 2012 to manage the canal project and received a 50-year concession from Nicaragua in 2013.
Environmental lobbies say the canal would threaten wildlife, reduce water quality and hurt public health. They contend that the canal – three times as long as Panama’s – would destroy about 400,000 hectares of wetlands and rain forests; dislocate fauna; and force thousands of indigenous peoples to relocate to places that would be anathema to their culture. Supertankers using the canal would damage coral reef systems, the lobbies argue.

FURTHER DISCUSSIONS
The audit suggested further discussions with indigenous peoples living in the canal’s proposed path and who have been opposed to the project. It also questioned the feasibility of the canal going through Lake Nicaragua, and the impact on the use of the lake for drinking water and recreation.

HKND has persistently rejected the assertions, and the government issued an environmental permit for the project in October. HKND commissioned UK assessor ERM to do an environmental impact assessment of the project, and later said the project is viable and there will be no damage to nature and water resources.

Were it to be delivered, Nicaragua’s Grand Canal would have implications for plans by Caribbean governments to make use of the region’s location with the development of infrastructure to capture expected increased volumes of maritime trade. These include Puerto Rico’s Port of the Americas, Cuba’s Mariel port and industrial complex, and proposed logistics hubs in Jamaica and the Dominican Republic. All these ventures are not predicated on Nicaragua’s Grand Inter-oceanic canal but on the USD $5.25-billion expansion of the Panama Canal that will allow the passage of larger vessels. However, the increased traffic expected through Panama will not begin on schedule in April 2016 as commissioning of the expanded facility has been postponed because of cracks in the new set of locks. The Panama Canal currently handles about 6% of global trade and this volume is expected to double with the expansion.

It is the growing volume of cargo being transported on “post-Panamax” vessels that will make the Nicaraguan canal feasible, HKND and the Nicaraguan government have suggested. There will be more than enough business to satisfy both the expanded Panama Canal and the Nicaraguan facility, the Nicaraguan government says. It argues that the canal is not a dream, but a necessary venture that will transform the country’s economy that is based on agriculture and light manufacturing, and ease chronic unemployment. The Government projects it will create 50,000 jobs during construction and that the added facilities and infrastructure will provide 200,000 jobs and catapult the economy to double digit growth.

*Canute James, PhD, former Senior Lecturer and Director of the Caribbean Institute of Media and Communication (CARIMAC), Mona Campus, University of the West Indies, was a reporter for the Financial Times of London and radio reporter, presenter and producer in London, England for the BBC.*
Caribbean port administrators need to be concerned

BY BERT SMITH*

The 2014 National Climate Assessment predicts two scenarios that are likely to seriously threaten sea ports and marine operations: the average global sea level will rise by up to (and more than) one metre (up to 4 ft.) by the year 2100; and, there is every likelihood that there will be a significant increase in the number of high-intensity Atlantic tropical storms. The impacts of climate change should therefore be of paramount concern to the shipping industry and particularly port authorities.

While attention in 2016 will no doubt focus on the opening of the expanded Panama Canal, continuing consolidation of container lines and bleak freight rates, port administrators need to remain mindful of the impact of climate change on their operations.

On December 12, 2015, consensus was reached by 195 countries to reduce their carbon output as soon as possible so as to reduce global warming to less than 2°C. The historic agreement was reached in France, at the end of the 21st annual session of the Conference of the Parties (COP) to the 1992 United Nations Framework Convention on Climate Change (UNFCCC) and the 11th session of the Meeting of the Parties to the 1997 Kyoto Protocol. The countries reached consensus after tortuous hours of negotiations and, at the end, proudly presented what has since been dubbed the "Paris Agreement."

The historic pact signed by all the countries represented, including Caribbean states, has apparently gone unnoticed by regional port operators and port administrators. This may be because maritime transportation is not integrated in the national climate change agendas of the governments in the region, despite the fact that sea ports play a critical role in their national economies. Island-states depend heavily on maritime commerce, imported fuels and the cruise ship industry.

Perhaps another reason for the apparent lack of interest is the absence of any specific mention of shipping or seaports in the final text of the Agreement. The primary reason for this omission is the recognition by the signatories that the International Maritime Organisation is the competent authority to adopt global measures to reduce greenhouse gas emissions from ships.

Unlike shipping however, ports and terminals are generally not subject to international regulations. The onus is on governments and national and regional associations to assess the implications of the measures agreed to in Paris. These measures will, ultimately, have a direct impact on the cost of port operations and port competitiveness.

MAJOR CONCERNS

The United Nations Conference on Trade and Development (UNCTAD), in its 2015 Maritime Transportation review, highlighted the particular vulnerability of seaports to the impacts of climate change given their location in coastal areas. Rising water levels, floods, storms, precipitation, extreme weather events, coastal erosion, inundation and deterioration of hinterland connections were...
CLIMATE CHANGE

identified as major concerns which in turn impacted shipping volumes and costs, cargo loading and capacity, sailing and/or loading schedules, storage and warehousing.

Other economic implications include increased insurance costs arising from the increased risk of damage to port facilities and the TT Club has reported that wind damage to quayside cranes has been the biggest weather related cost to terminals globally. The economic impact of extreme weather events was evident in October 2015 when the Port of Nassau was closed in anticipation of the effects of the passage of hurricane Joaquin, which forced several cruise ships carrying more than 25,000 passengers altogether, to cancel their calls on that port. Subsequently, hurricane Patricia made landfall in Mexico as a category 5 hurricane resulting in the closure of the Port of Manzanillo, Mexico’s busiest port. Meteorologists said that hurricane was to be the most powerful ever recorded in the Western Hemisphere.

Having regard to the predicted increase in extreme weather events, port closures will become more frequent and the consequent disruption to commerce will be significantly costlier as compared to a port closure due to a labour dispute. Considering the impact of climate change on marine infrastructure, port performance will no longer be influenced only by a stable labour relations environment, efficiency of cargo handling equipment, depth of channels or the level of facilitation by government agencies but also the level of resilience to cope with extreme weather events.

USEFUL TEMPLATE

Smart seaport administrators will not only be able to successfully implement appropriate strategies but will also be able to minimize disruption to operations by having a port recovery plan which enables the resumption of operations within a short time.

The US Marine Transportation System Recovery Unit (MTSRU), with some adaptation for small ports, provides a useful template for improving the resilience of ports to climate change impacts. The unit is comprised of terminal operators, harbour pilots, ship agents, stevedores, port authorities and other public and private stakeholders in the port community. Its sole purpose is the restoring of operations in the event of a port-wide disruption. Its framework allowed ports on the east coast to be reopened within a short period after hurricane Sandy in 2012 created a 14-foot storm surge.

Port operators have no choice but to be proactive in their response to the threats posed by climate change. Although there is a high level of uncertainty in predicting the impact of storm surges, wind damage or sea level rise, ports should collaborate with the environment and scientific community in planning their strategies to reduce the threats posed by climate change.

1 The TT Club is the leading provider of insurance and related risk management services to the international transport and logistics industry.

* Bert Smith is Director Legal Affairs at the Maritime Authority of Jamaica.

PORTSIDE CARIBBEAN 35

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C L I M A T E C H A N G E
The global accord reached in Paris, France, on December 12, 2015, sets goals for diminishing risks associated with climate change. The aim of the agreement between most of the countries of the world is to reach a global peak and then achieve a balance between greenhouse gas emissions and removal of those gases by the second half of this century. The political goal is to keep the global average temperature increase to significantly less than 2°C above pre-industry levels. Instead, the aim is to keep the global average temperature to less than 1.5°C. This would significantly reduce the risks and impact of climate change in most parts of the world. However, although the Paris declaration is a major step forward, climate change occurs and its effects are felt more acutely in low lying coastal zones, like the Caribbean. These effects can be potentially disastrous, due to specific natural and socio-economic pressures that exist in the Caribbean. This article explores these pressures and presents some practical tools to mitigate some of the more serious effects on Caribbean ports. It is PORTSIDE CARIBBEAN’s contribution to a regional discussion about climate change. No single port acting alone can solve the problem. Solutions and strategies are to be discovered through dialogue, cooperation and strong partnerships locally, regionally and globally. — Ed.

The Organization of American States (OAS) report Climate Change Impacts on Land Use Planning and Coastal Infrastructure, prepared by the National Ocean Service (NOS), [www.oas.org/macc/Docs/LUPinfraissues.doc](http://www.oas.org/macc/Docs/LUPinfraissues.doc), provides useful insight as to why climate change impacts the Caribbean so severely. It helps us to understand the specific risks rising sea levels pose to Caribbean ports.

Caribbean port systems are vulnerable to climate change because of a combination of natural and socio-economic realities. These include the reality that the Caribbean is in the hurricane belt. The socio-economic change from agriculture to seaside tourism, combined with a lack of integrated urban and coastal planning policies, as well as the cultural disposition and freedom of property owners to develop land for short-term profit. On most islands, ports are traditionally located on the seaside. And, in the last 50 years, many ports have become surrounded by unchecked tourism development. In many cases, ports have embarked on extensive tourism-related infrastructure development. In addition, many Caribbean islands have large expanses of low-lying land that are vulnerable to sea level rise.

Short-term profits and local jobs stimulated most of these investments and populations moved from higher ground under agriculture to lower coastal areas where tourists inhabit. Illegal construction in coastal areas and wetlands is widespread and sewage treatment is either low cost (e.g. septic tanks) or non-existent. Many hotels and urban projects in the Caribbean dispose of largely untreated waste directly into coastal waters. This practice killed a large portion of the ‘natural shock absorbers,’ including reef systems, mangrove areas and sea beds. Unchecked beach and land-claiming programs added to the onslaught, either by taking sand away where it is naturally required or putting it where it does not belong. The results: Caribbean coastal areas are overcrowded (high population density); and their natural protection has been destroyed or is in very poor condition.

When the sea levels rise and increasingly frequent and more severe storms occur, damage is more likely to disrupt entire communities and undermine the economic base of the country. This is the real threat: well-built, sustainable ports may survive. However, if the country does not survive, the port will suffer with it. Hence, the Caribbean Climate Change Impact’s port agenda is twofold: how do we build new or existing sustainable ports and how do we show our communities the way to survival?

### LOWERING THE RISKS

Lowering the risks requires full community participation and ports are in an excellent position to create awareness and to lead the way. Risk management should be an integral part of coastal infrastructure planning and zoning is the key word here. Ports can use zoning to direct, or redirect, high risk port activities to lower risk port areas and move working and storage areas to such zones. Incentives, for example lower rent and reduced insurance premiums, could be offered for relocation away from coastal areas.

Moving cargo storage and terminal reception areas beyond historic high-water lines reduces the risk to life and to the economy. Making sure untreated sewage and waste water in these areas do not end up in the sea helps to protect and restore the natural shock absorbers in and around the port. If untreated waste water is being discharged into the sea, monitoring and measuring the process in order to initiate corrective measures to protect reefs and mangroves is absolutely essential. Where high risk investments are to be allowed in higher risk areas, there should be tight regulations for building and for water management and waste treatment. A premium may be imposed on such investments in order to generate the necessary funding for monitoring natural shock absorbers and financing their restoration. This can be done either by inserting clauses to lease agreements or by stipulating specific insurance coverage.

Ports engaged in tourism-related development are well-positioned to lead the way for sustainable...
tourism. Limiting land reclamation for constructing or expanding hotels and beach-front properties and moving high-risk activities to lower-risk zones is an excellent strategy to demonstrate that sustainable tourism is feasible and profitable. Operators of tourism facilities in port areas should contribute in a real way to reef and water quality monitoring and restoration programs and should be involved in dialogue as to how adjacent port property is developed. This ensures that their business is protected for the longer term and makes them happy investors.

DEVELOPING A SUSTAINABLE PORT
In the spirit of the Accord, and the declaration of 195 countries at the 21st Conference of the Parties to the United Nations Framework Convention on Climate Change (COP21) in December 2015, port authorities and port managers, as a matter of urgent policy, must look very carefully at every resource that the port uses so as to identify areas where the carbon footprint of the port can be reduced. It is very important that the above assessments and recommended action are implemented with very close cooperation between the management and all the staff in order to be a success and not used as a tool to monitor any single employee or department.

Fresh water is a limited resource. With climate changes this resource may become even more scarce, if we do not include fresh water produced through desalination. And desalination requires high energy consumption. To enable better management of water, it is necessary to monitor all (water) consumption in the port. Consumption must be identified in terms of

“Lowering the risks requires full community participation and ports are in an excellent position to create awareness and to lead the way. Risk management should be an integral part of coastal infrastructure planning...”
of specific use with drinking water being the most important. The simplest approach is to divide water used in the port under two sub-headings: water for human consumption; and, “the rest.” Many ports export a lot of water when bunkering ships with drinking water. The price for the water should mirror the actual costs for producing and transporting the water, and should include an additional amount to cover costs for maintenance and future development. This is known as the full cost-recovery price.

COST REDUCTION

It is suggested that the port establish meters on the main source entering the port and at all user-points so as to measure water for the administration buildings, for canteens and other places where staff use or consume water. Other non-potable points should also be metered. Smart-meters can constantly send information about rate of consumption and are invaluable to detect costly leaks in the system. Every litre lost through leakage carries a cost which has to be paid in bills from the water supply company. And every litre of water lost is also a loss in energy from production and pumping.

Annual assessments of the water consumption in a port will enable the management to put control on those areas where water, for one reason or another, is not utilized optimally. In addition to the capability to map and manage use, effective metering and monitoring can lead to a significant reduction in water consumption and utility bills. It may also reveal that the way the “necessary” water is being used is not optimal. An example is water used for flushing. A pier using normal hoses may be better served by high-pressure water jets which use much less water. However, a high pressure jet system uses extra energy. These are factors to be weighed.

The COP21 Paris declaration had a special focus on all activities which cause emission of CO₂, the key driving factor for the increase in global temperature. Ports are themselves energy consumers. We suggest making an energy budget for the port, based on types (of energy) used and for what purposes: tons of gasoline; tons of diesel fuel; electricity (kilowatt hours). Carbon emissions generated by different energy types can be calculated. With an energy budget, the port will have an overview of the annual release of CO₂.

An energy audit can then be used to assess and quantify specific uses and generate information as to whether new types of equipment would lower emissions. The pay-back time for investing in new equipment may help to make the right decision that leads to lower CO₂ emission and thus contribute to a global reduction in the release of green-house gasses. Solar energy should also be considered as the unit-price for solar panels is constantly falling.

RISING SEA LEVELS

Caribbean ports must be constantly aware of risks they pose to climate change. This requires on-going environmental measurement and risk management programmes. By zoning port property into low- and high-risk areas and concentrating higher risk activities in lower risk areas, port managers can effectively limit damage to the environment and better protect their property. Finally, although in a national context ports may be considered small players, their operations do contribute to the release of greenhouse gasses and other pollutants. Every port must therefore contribute to a better world by doing the suggested analyses and assessments so as to provide themselves with a solid knowledge base upon which they can react and contribute to reducing the danger of the temperature increase and the potential of being consumed by rising sea levels.

*Jan Sierhuis, Director, Maritime Authority of Curacao (maritimecuracao@gmail.com)

** Jesper Goodley Dannisøe, Senior Project Manager, DHI Denmark (jda@dhigroup.com)
Challenges to application and implications for the Caribbean
– Part 2

BY KAREN A. ADAIR*

This paper outlines the major factors that impact the development and implementation of seaport tariffs in the Caribbean region. As a cost recovery tool, the role of tariff has changed significantly internationally, hence the need for Caribbean ports leadership to reconsider their approach and strategy. Part I was published in the previous issue of Portside Caribbean. The third and final part of this paper will be published in the next issue.

Approaches to tariff design

The approach to the design of seaport tariff in the Caribbean region is influenced by a number of factors. Foremost of these include:

1. Commercial elements of port operations
2. Frequency of tariff review and review methodology
3. Paucity of scholarly work in the region

Commercial elements of port operations

International literature relating to principles governing the approach and design of seaport tariffs highlight commercial considerations as the major factor in the determination of port pricing. As a result, cost recovery is viewed as critical to tariff design. In reviewing tariff studies of North America, the European Union and the Asia Pacific region, tariffs are categorized according to their costing approach. These approaches included:

(a) Cost-based pricing:
   This is applicable to services such as (pilotage, towage berthing/unberthing, mooring/unmooring, stevedoring, wharf-handling, receiving/delivering, cargo processing, etc.) The costing principle that governs this tariff is the cost of providing the service plus a mark-up. Cost-based ports can be subdivided into averages cost, variable cost and marginal cost.

(b) Performance-based pricing:
   The objective of this tariff is to facilitate efficient use of the port’s facilities and, as a result, the tariff focuses on performance.

(c) Value-based pricing:
   This is applicable to general tariff items such as port dues and wharfage. The objective of value-based pricing is to generate enough revenue to cover the cost relating to services and facilities.

(d) Market-based pricing:
   Tariff design is correlated to potential market demand so as to improve profitability.

Cost recovery and profitability models

In the Caribbean, the usage of cost recovery models vary in their levels of importance. They tend to be more important in privately owned facilities, where commercial consideration is paramount in tariff design and implementation. An example of this is at Kingston Wharves Ltd., where tariff, the subject of negotiations, and its framework, is based on a cost apportionment and a profitability mark up.

Cost apportionment relates to variable cost (vessel, cargo volume), and fixed assets. In publically owned ports (the majority of ports of the region) for example, Kingston Container Terminal (Jamaica), Deep Water Port of St John’s (Antigua), and the Port of Port of Spain (Trinidad), tariff design and its implementation are influenced by non-cost recovery considerations such as the socio-political factors. Historically this has occurred at seaports in small island states, which play a significant role in national development — its sustainability and related factors — and as an important contributor to national community welfare.

Tariffs and subsidies

The importance of seaports have led governments in the region to review tariff rates and introduce elements of subsidies and/or cross subsidies where they are of the view that commercial rate considerations are to the detriment of their constituents. In the early 1990s, cost-recovery methods for tariff design for public entities was proposed for Barbados. The perception of the leadership of the day was that, despite its good intention of cost recovery and mark up, it would make the Port of Bridgetown non-competitive when compared to neighbouring facilities. As a result, the recommendations of this study were abandoned. The decision-makers feared social and political dislocations at the port and its multiplier effect on the wider society. The highly discussed head tax on cruise ship passengers and compulsory pilotage for cruise vessels also provide more recent examples of efforts at ensuring that tariffs in public facilities do not become burdensome or that shipping lines are not able to play one destination against another.

At the dawn of the 21st century, public port-owned facilities began to be influenced by modernization of port administration, the objective of which was the introduction of a business-like environment. These changes began with the principle of liberalization to be followed by commercialization. More recently in the larger international ports/terminals, such as the Kingston Container Terminal, there is a strategy towards privatization and the welcoming of international port operating companies. To date, however, it is unclear what effect this strategy has had on the design, size, and competitiveness of the tariff of these facilities.
Frequency of tariff review and review methodology
The pattern of reviewing tariffs in the Caribbean is left to the leadership of individual seaports. As a result, standards vary for annual reviews. In well-developed facilities, (Point Lisas, Kingston Wharves Limited, Oranjestad and Barcade) tariffs are usually published, whereas other ports (Antigua and Barbuda), where such rates are infrequently reviewed, tariff details are only available to port users who purchase a Tariff Book from the Port Authority. Across the Caribbean port users have raised a number of issues with respect to the frequency, size and purpose of fee increases. Some of the socio-economic and political discussions have been:

a. Where tariff review is frequent:
   • The extent of such changes will ensure profitability and competitiveness of port
   • Or, alternatively, given rising port pricing, the possibility of social dislocation resulting from a reduction in ship calls and other forms of reduced business.

b. Where tariff reviews are infrequent:
   • The sustainability of the port, and the need for subsidies, in an era where governments are finding such measures increasingly unaffordable and less acceptable by international lending agencies which the region is becoming more reliant on.

The extent to which tariff review system, frequent or infrequent, connotes more than an arbitrary change of percentages it also raises concerns on the methods that are used in reviewing these tariffs.

Review methodology – historical rate comparison
In respect of review methodology, the historical rate comparison is the most common instrument used. The historical rate comparison measures the difference between port cost at the time the tariff was written against the current situation in an attempt to discern the adequacy of the earnings that are generated for the same port (World Bank Port Reform Tool Kit, Module 6, Port Regulations, page 9). Tariff differential rate comparisons are used periodically by some ports, but to a significantly less extent than historical rate comparison. A tariff differential rate comparison is an analysis in which the differences in tariff rates between the port under review, and that of its closest competitors in same types and classification of cargo or service, are measured.

The historical rate comparison is more commonly used in the Caribbean than the tariff differential rate comparison, as data on the former is easier to obtain and often classes of services outside of a country differ and, as a result, such comparisons are difficult. Ports in the region are unfamiliar with the theoretical rate comparison. A theoretical rate comparison is an analysis based on actual and theoretical cost. Actual cost is derived from a specific port while theoretical cost is compiled from the general cost from the conditions which prevail within ports in the country.

Paucity of scholarly work
Very little research exists in the public domain with respect to the factors influencing seaport tariff in terms of their design and review mechanisms. This is in contrast to other regions (Asia and the Pacific, for example) where a significant body of literature exists on seaport tariff for developing countries. The paucity of scholarly works or general information relating to seaport tariff is alarming, given the importance of the maritime industry, and ports in particular, to the economic development of the Caribbean region. Inadequacy of research and general discourse relating to the tariff begs questions related to the adequacy of considerations relating to the pricing of port services; the appropriateness of port pricing methodology; and, the region or country’s ability to make comparison with alternative models or systems.

Factors generic to the development of tariff
The factors commonly used in the development of tariffs are:

- Vessel size and or tonnage — (measured as GT, NT, DW, and LOA) for navigation related services (basic services) such as pilot age, towage, harbour dues, mooring and unmooring and berthing and un-berthing.
- Cargo type — weight and measurement of cargo, cargo characteristics and time spent in storage, service to cargo, containerization classification and service to container.
- Equipment — type of equipment hire, hiring period.
WHAT PORT MANAGERS SHOULD KNOW

• Port pricing through port charges — it is necessary to recover the charges of the port entity as this enables the port to meet its financial obligation, and puts it on a path to being self-supporting.

• Cost parameters — these can be quite wide and extend well beyond United Nations Economic and Social Commission for Asia and the Pacific. Discussion of cost-based pricing, performance-based pricing, value-based pricing, and market-based pricing. Heggie (Charging For Port Facilities by Ian G. Heggie) have suggested that included in the tariff is an inescapable cost and a social cost. Inescapable cost, once identifiable, sets the minimum charge for the tariff. (Social cost is the difference between market price and that of social opportunity cost.)

• The elasticity of demand — for a port service this is critical in the determination of the pricing system of assets and the extent to which they will be utilized.

• The role of the port authority — This is a critical factor with respect to tariff and is determined by the structure and the extent of its power and role.

Reorganizing of port authorities will also include the extent to which they will be involved in the development and implementation of tariffs. The increasing levels of landlord and privatized ports, especially in the EU, has resulted in a situation in which port authorities’ involvement in the tariff have become restricted to:

• Landlord ports — as a result of the leasing of the port facilities to carriers and shippers. The authorities’ involvement in the tariff is now limited to the area of navigation and harbour dues.

• Privatization — this has resulted in a number of actors providing services, making a complex tariff pattern for the tariff structure. ●

Karen Adair, Ph.D., is a consultant in port reform and trade facilitation; and a senior lecturer at the Caribbean Maritime Institute, where she also has responsibilities for the Customs Freight Forwarding and Immigration program.

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HOW LUCKY IS IT THAT MOST OF US CONSUMED TODAY SOMETHING THAT HAD BEEN GATHERED FROM A FIELD IN MEXICO, COSTA RICA, CHILE OR THE U.S., FERMENTED IN SCOTLAND, PLUCKED FROM ASIAN WATERS OR EMERGED FROM A STERILE LAB IN SWITZERLAND?

While the pace of growth of U.S. trade is slowing, the expansion in the trade of perishables is significantly faster! In 2014 close to 10% of U.S. trade, worth approximately USD $382.01 billion, was made up of perishable goods. This figure represents a 9.31% increase over 2013 and a rate almost three times the growth for all U.S. trade.

How lucky is it that most of us consumed today something that had been gathered from a field in Mexico, Costa Rica, Chile or the U.S., fermented in Scotland, plucked from Asian waters or emerged from a sterile lab in Switzerland?

The state of Florida is investing in port facilities and promoting private investments in infrastructure to accommodate perishable goods and ensure a well secured distribution system. Miami International Airport recently became the first airport in the U.S., and only the second in the world, to be certified by IATA as a pharmaceutical freight hub. This trend is not unique to U.S. trade alone. According to Drewry’s latest Reefer Shipping Market Annual Review & Forecast, despite a variety of adverse economic and climatic conditions, perishable reefer cargo growth appears unstoppable. In 2014 worldwide perishable reefer trade had increased by 1.8%, reaching almost 190 million tons. Although this was barely half of the growth seen in 2013, it nevertheless represented a continuing growth pattern, Drewry says. With the exception of the citrus trades, all perishable reefer cargoes saw trade growth in 2014.

The growth in reefer cargo is impressive not only because it has occurred consistently throughout the last decade, but also because it has done so despite a global economic downturn; severe weather conditions in many growing areas; as well as terminal strikes and other industrial actions. Regardless, it seems the perishable
The production system, among other factors. The share of cargo between the reefer container ship mode and the specialized reefer mode continued to grow in favour of the former — with over three-quarters of the perishable reefer seaborne trade being shipped by reefer container ship services in 2014. By 2019, reefer container ship services are expected to carry over 23 million tons more cargo than they did in 2014. [Reefer Trade Immune to Downturn — World Maritime News, Aug 24, 2015]

Stimulated by rising incomes and growing consumer interest in product variety, freshness, convenience and year-round availability — trade in fruit and vegetable products has been among the most dynamic areas of international agricultural trade. The effect of income growth on consumption is more pronounced in developing countries. Compared to developed countries, they are expected to spend larger shares of extra income on food items such as meat and produce.

An upturn in the U.S. economy would increase the demand for imports. Mexico and the Central American and Caribbean countries would benefit especially from such a development, as they are more heavily dependent on U.S. demand for imports. Approximately 80% of Mexico’s exports go to its northern neighbour, while the figures for Bahamas, Jamaica, Barbados, and the Central American region are 70%, 50%, 40%, and 40%, respectively.

**PRODUCTION AND LOGISTICS**

Despite the adverse climate conditions, pests and diseases, and increased competition in international markets, Latin American countries have made great efforts not only to raise agricultural productivity, but also to increase the value added to their agricultural products and to improve their marketing channels. The incorporation of technologies and innovations has been the main reason for the improvement in productivity.

As regards value added and marketing processes, many countries in the Caribbean region have made serious efforts to position themselves in the markets for healthy products, as well as highly nutritious or gourmet fruits and vegetables. In doing so, they have not only achieved a rapid increase in the production of organic products and crops that supposedly offer health benefits (herbs, quinoa, chia, etc.), but have also constructed value-added strategies based on differentiation by origin, the type of technologies employed, the people involved in the production process and the environmental impact of the production system, among other factors.

To maintain the improvement trend, countries need to strengthen family agriculture’s links with markets by promoting business skills; develop alternative markets and marketing channels; make improvements to risk management programs and instruments; and, build capacity to make it possible to comply with new trade standards.

Advances in transportation technology have made it possible for shippers to deliver perishable products to purchasers thousands of miles away with no substantial loss in freshness and quality, at lower and lower costs. Lower transportation cost has a similar effect on trade as a tariff cut. It reduces transaction costs, or the wedge between the product price in the exporting and importing countries, thus stimulating trade.

New technologies and techniques that were developed in the past 30 years, which reduce deterioration of food products, have helped shippers extend the marketing reach of perishable products. In addition, new technologies in transport are gradually opening the ocean and overland trades to a host of perishable products.

Effective logistics are essential to the organization and competitiveness of the fruit and vegetables sector in the context of a retail market, which increasingly requires the development of a continuous flow system. The better the cool chain is kept intact, the longer the product shelf life and therefore the product competitiveness and value.

Rapid cooling of produce following harvest is essential for crops intended for transport in refrigerated ships or containers. Added value is achieved in pre-cooling the produce immediately after harvest.

Efficient logistics management is the undisputed key to the management of “variable time,” which is the main constraint to the economic success of production. Time to market is made of the “biological time” in agriculture and “logistical time” — delivery times, as well as quality control, packaging and time of conservation throughout the supply chain. For these reasons, control and rationalization of logistics now play a strategic role for all foodstuffs and especially perishable products.

The fluidity of trade flows in fruit and vegetables through logistics and the maritime transport system has a major role to play in the competitive international market.

The cool supply chain is made of interconnection infrastructure (logistics platforms and hubs), while the keywords of marketing are: quantity, quality, range, extended flows delivery times, and ICT (bar codes and RFID). In this context, improvements in efficiency and rationalization of the supply chain can be envisaged. Among those critical factors, logistics, and transport as a key component, is still the most complex element. Logistics is what weighs most heavily on the final cost of fruit and vegetables. In order to cut the logistics costs and improve efficiency, major world distributors went beyond the traditional by eliminating the number of actors and intermediaries, and created direct relations with producers.

The fluidity of trade flows in fruit and vegetables through logistics and the maritime transport system has a major role to play in the competitive international market.

The weakness of world trade since the global financial crisis continues to undermine the contribution of exports to growth. Therefore, countries need to make bigger efforts to promote the competitiveness of their exports. Caribbean nations should consider a strong, sustainable export agroindustry as a path to growth.

The growing U.S. demand for high quality agro products, being a natural partner for Caribbean trade, could demonstrate the perfect match for Caribbean growth. Policies intended to foster economic diversification should help to create adequate conditions for undertaking new productive activities; build capacities in the rural population; create the correct incentives and opportunities for young people; and, stimulate higher productivity family farming segments; while creating avenues for private investments in the logistics infrastructure on the other hand.

Regional integration processes can boost aggregate demand, via trade integration, and enhance productivity and competitiveness through greater integration of production and infrastructure. ●

* Nehama Bikovsky is President of Maritime Consulting Enterprise. nehama@maritimeconsultingent.com.
Failure or fear of it vital for creativity

FRITZ PINNOCK, PHD, FCILT

“Managers need creative and energetic team members who can solve problems through innovation; who can use ordinary resources to do extraordinary things. Once managers learn how to motivate individuals, they are better able to achieve higher levels of productivity.”

Failure or fear of it vital for creativity

For creativity to exist, there must be failure! In other words, instances of creativity are very often preceded by the threat of (or actual) failure.

This astounding position provides a unique perspective into managing people and more importantly managing ourselves. Creativity is a coveted asset in the workplace. Managers need creative and energetic team members who can solve problems through innovation; who can use ordinary resources to do extraordinary things. Once managers learn how to motivate individuals, they are better able to achieve higher levels of productivity. How can they do this? They reap these rewards by accepting that failure is essential to creativity. I will use three articles recently published in the Harvard Journal to support this claim. The articles were written by three different writers who made similar discoveries about an undeniable link between failure and creativity.

CREATIVE THINKING

To think creatively is to direct your thoughts towards achieving some specific objective through an alternative, often unconventional approach. Creative thinking is not a leisure activity. Neither does it happen unintentionally.

In the first article 'The No. 1 Enemy of Creativity: Fear of Failure', Peter Simms posits creative thinking in the context of an enabling force that fuels independence, entrepreneurship and an enterprising attitude. Creative thinkers design concepts, not just products, he states.

CREATIVITY IN ORGANIZATIONS

Creativity within organizations is as vital as water is to humans. Creativity is what ensures an organization’s survival. The best way to illustrate the importance of organizational creativity is by sharing the following example. If you’ve heard of Six Sigma, then you may know that it is a widely used management style in both regional and international companies. I believe however that it is, in effect, the antithesis of innovation and entrepreneurial discovery. It is far more profitable to decrease dependency on strict work mode formulas and explore new ways of getting the job done. A more task-oriented approach uses creativity as a driving force.

THE ROLE OF FAILURE

Within organizations, failure is feared, often avoided and seldom entertained. However, instances of failure can serve as teaching opportunities for mentors, as they mould junior staff and trainees. Failure is therefore useful for setting goals and achieving them, motivating people and pushing the boundaries of conventional ideals. It is because we fear failure that we push towards success. We set smart objectives because we want a practical way of avoiding failure and measuring success. The possibility of failing generally keeps us focused and resilient; overcoming obstacles to achieve objectives, despite less than favourable conditions in which we have to work.

Our personal feelings about failure influence how we view failure within the workplace because the work environment is an extension of ourselves. We carry over into the working environment, our value systems, our religious and cultural beliefs, and our fears. All of these form our psychological blueprint and are embedded in us at childhood. At a personal level, we fear failure because we were never taught how to accept it, embrace it or use it for good; as fuel for our creative sensibilities. We learn that it is wrong to fail and see it as the end rather than a pit stop on the journey to success. As a consequence, we never learn how to invest in ourselves and others to plan for recovery after inevitable failure. Instead we perpetuate the mood of stagnation that failure often encourages. However, we can learn to use failure to our advantage. Some individuals are better at this than others.
Simms believes that “entrepreneurs . . . think of failure the way most people think of learning.” History has shown that when expert entrepreneurs make decisions, they may make lots of mistakes to discover new approaches, opportunities, or business models. Many have admitted this inevitable setback in the process of progress. Simms uses Howard Schultz, an American businessman and writer as a prime example. Schultz has an impressive profile as an entrepreneur and is best known as the chairman and CEO of Starbucks and former owner of the Seattle SuperSonics basketball team. He co-founded Maveron, an investment group, in 1998 with Dan Levitan. He also started Il Giornale in Seattle, the company that he used to later buy the original Starbucks brand and assets. Il Giornale had non-stop opera music playing, menus written in Italian and no chairs. This concept proved very successful as the popularity of the business grew tremendously. When asked about this creative design, he admitted that “We had to make a lot of mistakes before discovering a model that worked.”

If success is to be achieved, we cannot be afraid or ashamed of failing. We must learn how to harness the positive spin-offs and tailor them to suit our needs.

**HOW DOES FAILURE INFLUENCE CREATIVITY?**

The relationship between creativity and failure is reflected in our daily activities but is not always readily identifiable.

**I. Fear of Failure can help us to solve ‘the right problem’**

Simms states that, for him, the most important insight to be gained from creative thinking is learning how to solve the right problem. “You have to make sure you’ve defined the right problem before you try to solve it. So, you act like an anthropologist to understand human needs and problems before jumping to solutions.” If we do not adopt this approach we will waste valuable time and money on the insignificant things while totally neglecting the core issues. We would have essentially failed to solve the right problem and if we are to evade failure, we ought to apply a key tenet of creative thinking, which is decisive thinking. This helps us to target our efforts towards time-efficient problem solving.

**II. Failure can be a launching pad for second attempts**

“I have not failed, I have just found 10,000 ways that don’t work.” This popular quote from Albert Einstein best explains the relevance of delayed success. When we do not get the desired results on the first attempt, we are compelled to try different ways of achieving same, on our second, third or hundredth attempt, which makes us more creative. This process is especially important within organizations.

**III. It makes you more flexible**

Being a more flexible professional means being able to adapt to different environments and still function as you ought to. This is not just limited to a physical space. We often find ourselves in less than desirable emotional environments because of failures, but we still have to function professionally. Having failed multiple times, we are better able to deal with these emotions in a way that does not negatively affect our productivity. However, in order for this approach to work, we must not use too much of our time to reflect on past failures. If your internalized view of failure is anything that is not perfect, then you are disempowering yourself from exercising your inherent creativity. Sadly, this is the way too many of us process our failures.

**IV. It encourages us to take risks**

In Teresa Amabile’s article Is Management the Enemy of Creativity? [Harvard Business Review Blog, September 25, 2008, https://hbr.org/2008/09/creativity-and-the-role-of-the/ we see that there is a crisis in corporate management. “While the basis of competition has shifted decisively to innovation, most management tools and approaches are still geared to exploit established ideas rather than explore new ones.” This safe approach is restrictive and debilitating. “Perhaps that’s why corporate acquisitions have reached such high levels over the past decade. Creativity takes root in entrepreneurial ventures and big companies, unable to cultivate it within their own walls, end up buying it instead.”

**V. Pending failure teaches us how to manage pressure**

Amabile and colleagues Constance Hadley and Steven Kramer, in another article, entitled Creativity Under the Gun, report on a case study of innovation brought about by time constraints. They write that “the lauded design firm Ideo has put its innovative spin on personal computers, medical equipment, automotive electronics, toys and even animatronic movie robots – and many of the new designs for those products were drawn up in three months or less.” This is remarkable work, done in a short timeframe, but it had to be done. If not, this would have constituted failure. Pending failure makes us capable of using pressure as a management technique, to spur people on to great leaps of insight and urge them to tap into their productive reserve.

Generally, organizations benefit from creativity and this is more likely when there is actual, pending or fear of failure. The onus is on us to use failures as opportunities to grow and build on our creativity and encourage others to do the same.

*Dr. Pinnock is Executive Director of the Caribbean Maritime Institute, Kingston, Jamaica.
Whose purpose have we served?

BY JOSEPH CERVENAK*

On the next rung of the leadership ladder is your expertise, specific skills set or your reputation of accomplishment that positions you as the go-to person for production. When information or guidance is needed, the team counts on the exactness of your past proven capabilities and in turn, they follow your lead. In time, you learn that personal relationships and mutual trust are foundational to successful leadership. It is, however, the leader who must take the initiative and build these relationships and invest time and effort with the team. Investment takes the form of training and development and career advancement programs. This leadership level is termed reproduction. Reproducing the team’s capabilities and developing forward thinking mindsets are ongoing internal engagements. Such engagements, in turn, shape and define the culture of the team and by extension, the culture of the company.

As internal engagement expands, the role of the leader reaches that rare level that Maxwell calls “the pinnacle.” That is the position from which tomorrow’s leaders are developed to build future strategies as well. This is the time for expanding relationships and spheres of influence beyond the present. It provides an opportunity to build a legacy that extends beyond our tenure, even beyond our lifetime. And, it is a time to prepare for the implementation of an exit strategy that coincides with a peak time of enterprise and personal strength and success.

This five-step leadership ladder provides a progressive foothold, echoing the charges of Delphi, Adams and Davis. It further provides the opportunity to view our circumstance, to look towards a destination and to develop a plan to reach the next step and perhaps even the rarified air at the pinnacle.

After all of this, we look into the mirror and ask, Have we been successful? Yes, but . . . ah, the ubiquitous ‘but.’ But whose purpose have we served? How do we measure leadership? What is the metric to which we aspire? Profit? Shareholder equity? Wins or losses? Winning over the competition? What is it that drives us?

It has been argued and it could be that genetics and environment are the early classic indicators of our behavior. Adding to today’s science suggests that the effects of the neurotransmitters such as serotonin, thought to be responsible for maintaining mood balance and, if deficient, may lead to depression; and, dopamine, which is associated with sensation-seeking or risk taking; or, oxytocin, hormone and brain neurotransmitter, in popular press, referred to as the cuddle, hug or bliss hormone. So, it could be that our parents; the places we lived; or, the chemistry of our bodies also have effects that govern our manner, activities and actions.

The definitive question: whose purpose have we served? The operative term is “served.” In answer many theories, models, concepts and philosophies have been posited, yet none is a single favourite, the be all and end all. However, within the question is the locus of the answer, namely, whom do we serve. Again, reverting to ancient times we learn that Lao-Tzu the Chinese philosopher and author and founder of Taoism, prescribed what we call today steward leadership or ethical leadership. This leadership practice puts the needs of others first, that is, leaders serve. Leaders put the needs of people first by development and then by gradually sharing authority and power. Leadership is the verb of the Oracle, John Q. Adams, and Baron Davis, as well as those anointed as the nobility of leadership.

Leadership can be taking action for the good of others.

*Joseph Cervenak is managing principal at Kemper~Joseph Ilc.
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