

# -Source

# Caribbean Utilities Looking Ahead To Stave Off Fresh Water Scarcity



Two years after severe drought wreaked havoc with a number of Caribbean counlacksquare tries, some are now adopting new strategies in a bid to prevent a repeat of a situation where countries were rationing water and imposing strict restrictions on residents.

"We have embarked on a programme geared towards management of the catchment areas, which includes preventing deforestation, agricultural activities and use of chemicals in protected areas and overall limiting human activities in protected areas," said Bernard Ettinoffe, General Manager of the Dominica Water and Sewage Company (Dowasco).

He added, "We have also embarked on educational programmes at the schools and community levels aimed at raising awareness of the need for conservation of water resources; and more recently have begun giving consideration to an Integrated Water Resource Management Approach to the management of land and water resources."

Ettinoffe said Dominica, like many other countries, has seen some decline in water levels in rivers and streams, but that the island, also known as the Nature Isle, still boasts of an abundance of good quality fresh water.

"Whereas measures are being taken to preserve the resources for future generations, the risks of no water or even inadequate supplies for decades to come is minimal," Ettinoffe said.

The neighbouring twin-island state of Antigua and Barbuda is reporting higher than normal rainfall over the past 12 months.

"Our surface water resources are at max capacity," Ivan Rodrigues, water manager of the Antigua Public Utilities Authority (APUA), said. But in spite of the higher than normal rainfall, an Antiguan meteorologist has expressed concern that not enough rainwater is being caught. "I have always believed that we need additional surface storage so that we can capture and keep more of the rainfall that we do get," said Keithley Meade, director of the Antigua and Barbuda Meteorological

"The rainfall mostly does not even get to the aquifers (water stored in the ground), since the runoff is pretty fast. This is one area where I think we should have improved and still need to do so," he explained.

Even with their increased focus on water management, financial constraints prevented representatives of the tiny islands in the Caribbean from attending a major gathering -- the 6th World Water Forum in Marseille, France -- held March 12-17.

Despite their absence though, Caribbean countries kept a close eye on the meeting, which had earlier set the ambitious target of going down in history as the forum that will bring solutions to water, based on openness and exchange.

"DOWASCO will review the findings and recommendations," Ettinoffe said, adding that particular attention would be paid to Climate Change.

"Climate Change and climate variability is as real to Dominica as to many other countries. We are experiencing more intense rainfall and also occasional drier spells, both of which come with their own challenges, which must be managed.

"More intense rainfalls result in siltation of streams and rivers and greater need for water treatment and even the need to shut the supply down at times. During drier periods, there is always need for caution and conservation," he added.

Salinisation of fresh groundwater is yet another concern for Caribbean islands. "Both Antigua and Barbuda are small islands. Our well fields are close to the coast, hence the salinisation of this resource (by over exploitation or rising sea levels) is a major concern," Rodrigues said, noting "our plans include artificial recharge, reducing exploitation in some areas, seeking inland resources, and improving monitoring systems.

"We have also installed additional desalination capacity on Antigua and we are in the process of doing the same for Barbuda," Rodrigues added.

But, he said, the additional desalination capacity will not meet present needs of a country which presently utilizes 20% surface water and 10% groundwater.

Programme Director at the St. Lucia-based Caribbean Environmental Health Institute (CEHI) Professor Christopher Cox says "sea level rise and salinisation" is a concern in other parts of the Caribbean

"We know in The Bahamas, in Barbados and in St. Kitts that the coastal aquifers, where you have overabstraction, it sucks up the salt water component into the fresh water so the fresh water sits on top of the salt water," he explained.



"What happens is that as you draw more fresh water, it actually pulls in the salt water with it. If you get sea level rises, the saline interface with the fresh water will rise also, or move further inland, so that means it's more likely that your wells will be intruded with salt water."

Cox said the Caribbean is very vulnerable in terms of its fresh water resources, noting that the human influences were to blame. "It's not only about clearing trees but you reduce water availability when you pollute the water. For example, in the case of Antigua, we've heard that there is a lot of land use conflicts and some of the reservoirs are receiving direct contamination from households and other types of activities whether it be agriculture or commercial enterprises."

He also pointed to problems with water availability in rural areas of St. Lucia, Jamaica and Trinidad. Cox said juxtaposing these situations with the Climate Change issues, where it is being forecast that the Caribbean region, particularly the Eastern Caribbean, could see declines in average annual rainfall by between 30-50%, the dry seasons will become more intense and result in problems with water supply.

He said Caribbean governments are slowly coming around to the whole concept of Integrated Water Resources Management, with Jamaica being the most advanced in this regard.

"Governments are slow to put in place strong polices for protection of water resources. "The big problem is that people in the Caribbean think water is free. But there is a cost to get it to the stage where it does not constitute a health risk. "In the Caribbean, water is not given the level of importance it deserves," he concluded.

(by Desmond Brown, IPS)

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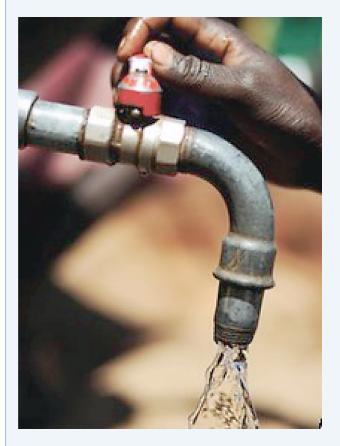
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# UN Meets Millennium Development Goal on Drinking Water



The Millennium Development Goal for access to clean water has been reached, ahead of the target date of 2015. Now, 89% of the population of the world have access to improved

water supplies, up from 76% in the base year of 1990.

UN Secretary General Ban Ki-Moon hailed the achievement of halving the number of people without access to improved drinking water.

He said it was thanks to people who had seen it not as a dream, but a vital step to improve health and well-being.

Improvement to clean water supplies has not been even: 40% of those still without access to improved drinking water live in sub-Saharan Africa.

Worldwide, almost 800 million people still drink dirty water. But in the past 20 years, two billion people have gained access to improved drinking water.

While this was the first significant Millennium Development Goal (MDG) to be reached, the charity Water Aid says that the other part of the target, for safe sanitation, is more off track than any other MDG.

The biggest challenge for this target is in India, where more than half of the population, 626 million people, do not have access to a toilet.

The other MDGs, including those on reducing poverty and improving access to education, are unlikely to be hit by 2015. The global economic downturn and greater pressure from increased population have pushed success even further out of reach.

### World Water Facts

- 1.2 billion people in developing countries lack access to safe sources of water;
- Over 141 million urban dwellers in Latin America and the Caribbean do not have access to safe drinking water;
- 2.4 billion people lack access to safe sanitation services;
- 3 billion people every year suffer from water-related infections;
- More than 5 million are killed every year mostly by diarrhea-related diseases caused by lack of water;
- Each day over 10,000 children under the age of five in developing countries die as a result of illnesses contracted by use of impure water;
- Global demand for fresh water doubles every 20 years, which is twice as fast as human population growth;
- Millions of women in several countries have to walk at least three miles daily to fetch water:
- World agricultural yield will decrease by 50% by 2020;
- By 2050 the world's water will have to support agricultural systems to produce enough food for an additional 2.7 billion people;
- More than one billion people in water-poor regions around the world survive each day
  on the same amount of water used to flush a toilet or bathe for five minutes only five
  litres.
- Each person in the world requires only 13 gallons (48 litres) of water per day; in the USA each person uses an average of 132 gallons (500 litres), Canadians use an average of 79 gallons (300 litres) and in England each person uses 52 gallons (200 litres) daily;
- Water is important to production: To manufacture each new car requires use of 39,000 gallons (148,000 litres) of water;
- Water can be consumed in strange ways: A 60-watt incandescent build can consume up to 6,000 gallons (22,710 litres) of water per year;
- Water and energy are critically interrelated and mutually dependent, as each needs the
  other: production of energy requires large amounts of water and production of water
  requires large amounts of energy;
- Production of drinking water from impure sources can be quite costly on energy: Processing each one cubic metre of drinkable water through desalination using reverse osmosis (forcing salty water through a membrane to remove the salt) requires about 2k Wh of electricity.

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### CAWASA ED advises on 'Building Resistance to Climate Change'



CAWASA Executive Director Victor Poyotte

t the invitation of the Environment and Sustainable Development Unit (ESDU) of the Organization of Eastern Caribbean States (ESDU-OECS), CAWASA Executive Director Victor Poyotte made a presentation on "Building Resilience to Climate Change" to the Technical Advisory Committee of the OECS.

The presentation, which was delivered in three parts [WHERE and WHEN], dealt with issues pertinent to increasing the resilience of the water sector and the impacts of climate change.

Part One examined issues relating to the sources of water supply in the OECS, the governance framework, water resource management, water services regulation, the role of water utilities as service providers, water resource use policies and water sector financing.

Part Two discussed the various impacts climate change has had or is having on the Water Sector. It identified the main characteristics of climate change (such as extreme weather events, more frequent hurricanes, storms, earthquakes, floods, tsunami, sea rise, etc.) This presentation also highlighted the impact of climate change on public health, social, economic, environmental and financial aspects of utility operations.

Part Three recommended specific policy measures the OECS governments should adopt in order to build resilience to climate change in the water sector. These include: conducting a water resource audit, improving resource management, updating governance instruments, streamlining water resource use, regulating water sector services, training water utility operators improving water utility management and providing adequate financing for the water sector.

Generally, the CAWASA Executive Director advised that OECS governments need to take steps to improve water storage and access to potable supplies.

He also urged that they introduce policies to make it mandatory for developers to engage in rain water harvesting for residential and public buildings, for tourism, construction and agriculture-related activities.

The presentation emphasized that subregional governments have a vested interest in ensuring the availability of water for improved health, as well as for crisis management such as responding to droughts and putting out large fires. To this end, governments are asked to make adequate budgetary allocations for water sector development, while utilities should forecast future growth in the sector.

Where necessary, governments and utilities were also strongly urged to examine alternative sources of water supply, including construction of reverse osmosis (RO) plants.

# UN Water says: Save Water and Ensure Food for All

There are 7 billion people to feed on the planet today and another 2 billion are expected to join by 2050. Statistics say that each of us drinks from 2 to 4 litres of water every day. However most of the water we 'drink' is embedded in the food we eat. Producing 1 kilo of beef, for example, consumes 15,000 litres of water, while 1 kilo of wheat 'drinks up' 1,500 litres.

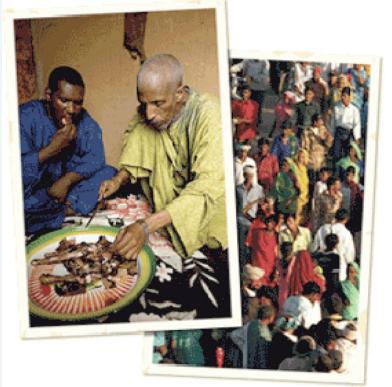
When a billion people in the world already live in chronic hunger and water resources are under pressure we cannot pretend the problem is 'elsewhere'.

Coping with population growth and ensuring access to nutritious food to everyone call for a series of actions we can all help with:

- Follow a healthier, sustainable diet;
- Consume less water-intensive products;
- Reduce the scandalous food wastage: 30% of the food produced worldwide is never eaten and the water used to produce it is definitively lost!
- Produce more food, of better quality, with less

At all steps of the supply chain, from producers to consumers, actions can be taken to save water and ensure food for all.

And you? Do you know how much water you actually consume every day? How can you change your diet and reduce your water footprint? Join the World Water Day 2012 campaign "Water and Food Security" and find out more! (Courtesy: UN Water





## UN Secretary General calls for more sustainable use of water

On World Water Day, 22nd March 2012, United Nations (UN) Secretary-General Ban Ki-moon issued the following Message from his New York headquarters:



UN Secretary General Ban Ki-moon

ver the coming decades, feeding a growing global population and ensuring food and nutrition security for all will depend on increasing food production. This, in turn, means ensuring the sustainable use of our most critical finite resource - water.

The theme of this year's World Water Day is water and food security. Agriculture is by far the main user of freshwater. Unless we increase our capacity to use water wisely in agriculture, we

will fail to end hunger and we will open the door to a range of other ills, including drought, famine and political instability.

In many parts of the world, water scarcity is increasing and rates of growth in agricultural production have been slowing. At the same time, climate change is exacerbating risk and unpredictability for farmers, especially for poor farmers in low-income countries who are the most vulnerable and the least able to adapt.

These interlinked challenges are increasing competition between communities and countries for scarce water resources, aggravating old security dilemmas, creating new ones and hampering the achievement of the fundamental human rights to food, water and sanitation. With nearly 1 billion people hungry and some 800 million still lacking a safe supply of freshwater, there is much we must do to strengthen the foundations of local, national, and global stability.

Guaranteeing sustainable food and water security for all will require the full engagement of all sectors and actors. It will entail transferring appropriate water technologies, empowering small food producers and conserving essential ecosystem services. It will require policies that promote water rights for all, stronger regulatory capacity and gender equality. Investments in water infrastructure, rural development and water resource management will be essential.

We should all be encouraged by the renewed political interest in food security, as evidenced by the high priority given to this issue by the agendas of the G8 and G20, the emphasis on the nexus of food, water and energy in the report of my Global Sustainability Panel, and the growing number of countries pledging to Scale Up Nutrition.

On this World Water Day, I urge all partners to fully use the opportunity provided by the Rio+20 UN Conference on Sustainable Development. In Rio, we need to connect the dots between water security and food and nutrition security in the context of a green economy. Water will play a central role in creating the future we want





# CAWASA Preparing Saint Lucia's National Synthesis Report for Rio +20

Saint Lucia has been preparing for the upcoming 2012 United Nations Conference on Sustainable Development (UNCSD) in Rio de Janeiro, Brazil in June – and CAWASA has been part of that process.

The conference is being held on the occasion of the 20th anniversary of the 1992 United Nations Conference on Environment and Development (UNCED) in Rio de Janeiro and the 10th anniversary of the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg.

The conference will seek renewed and assured political commitment for Sustainable Development, as well as assess progress to date and the remaining gaps in the implementation of the outcomes of the major summits on Sustainable Development.

It will also address new and emerging challenges and to this end the conference will focus on two themes: A Green Economy in the context of Sustainable Development and Poverty Eradication; and The Institutional Framework for Sustainable Development.

The preparatory activities were undertaken in a three-phased national consultation process that contributed to the preparation of the National Synthesis Report.

The preparatory activities were aimed to build

the capacity of the Saint Lucia delegation to engage more fully in the Rio Conference and to ensure continuing efforts to implement the expected outcomes.

As part of Saint Lucia's efforts to participate in preparatory activities, the United Nations Department of Economic and Social Affairs (UNDESA), contracted CAWASA to prepare the stocktaking report, conduct a multi-stakeholder consultative meeting and Prepare the Draft National Synthesis Report.

CAWASA Executive Director Victor Poyotte served as the Principal Consultant for the assignment, with administrative supported from Programme Officer Suzanne Joseph.

### WRMA's 2012 World Water Day Message

### SAVE WATER & SECURE FOOD!

The Water Resource Management Agency (WRMA) of St. Lucia's Ministry of Sustainable Development, Energy, Science and Technology on March 23rd observed World Water Day (WWD) 2012, calling on consumers everywhere to conserve water and on farmers to observe proper farming practices, all to ensure Water and Food Security and secure a better future for later generations.

Fitzgerald John, Senior Agricultural Officer in the Ministry, recalled the pressures and problems posed by the long and strong drought caused by El Nino in 2009-10 and the subsequent passage of Hurricane Tomas, which devastated the island's water supply

and farming communities.

He said that period taught St. Lucia telling lessons about "why it's important to conserve water and to adhere to good farming practices and proper building codes."

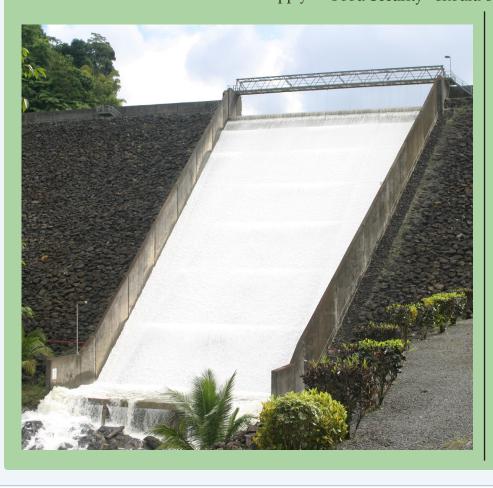
"We witnessed almost extreme measures being adopted in order to enjoy some of the basic amenities and fundamental human rights for survival. We made promises and pledges (so as) not to return to this situation again, unprepared," he observed. But, he added, "no sooner as these amenities were restored, over time it quickly became business as usual for some."

John said the WWD 2102 theme of Water and Food Security "should serve as a reminder of

that dark day in our history where our nation became obligated to practice all that is correct to mitigate such natural occurrences."

He implored consumers to "Use water conservatively, use every drop sparingly, and engage in good farming practices"; and he also called on all at the WRMA "to ensure that these standards be maintained and by doing so securing a better future for the next generation."

The WRMA, since inception, has been promoting educational and sensitization programs island-wide, aimed at drawing closer attention to the importance of water conservation – and, by extension, food production.





## CAWASA Secretariat News

#### CAWASA attended ABC Board Certification Meeting in Florida

Program Officer Suzanne Joseph represented CAWASA at the 25th Conference of the Association of Boards of Certification (ABC) held in Tampa, Florida from January 17-21, 2012, where he made a presentation on the topic "Overcoming Operator Certificate Renewal Challenges in a Caribbean Multi-Island Environment". The highlight of his paper was on the administrative challenges experienced by CAWASA Secretariat in relation to the certification program policy. He also offered solutions to overcome these challenges. Over 100 persons attended the Conference.

### Office Assistant furthering studies in Canada

Chantal Maxius, CAWASA's Administrative Assistant left the post last November (2011) for Canada to pursue higher education. The Executive Director and Program Officer recalled her diligence while at duty at the Secretariat and wished her well in her pursuit of her studies.

#### Certification examinations

### 18 wrote Trinidad and Tobago certification exams in March

A Certification Examination National Coordination Agreement was signed between CA-WASA and Irwin Gill of WASA, Trinidad & Tobago, as a result of which 18 candidates wrote the examinations in Wastewater Treatment on March 3, 2012 in Trinidad & Tobago. The 18 operators also wrote the Class I Examinations in Wastewater Treatment and nine were successful, attaining 70% and over.

#### 4 Passed November 2011 Exams

On November 25, 2011, nine operators and analysts from St. Lucia, Dominica and Montserrat wrote their certification examinations. Four passed – three in Level I and one in Level II.

### DOWASCO operator topped June 2011 exam results



DOWASCO's Jefferson Durand

Forty-two operators and analysts from CA-WASA member-utilities sat the June 2011certification examinations. Eight passed, with one, Jefferson Durand of DOWASCO (Dominica) attaining Level IV in Water Distribution. The Secretariat congratulates Mr Durand on his achievement, having attained the highest level.

## Procurement & Inventory Management Workshop held in Grenada



Participants at the CAWASA Grenada Procurement and Inventory Management Workshop

A Procurement & Inventory Management Workshop was held at the Flamboyant Hotel Conference Room in Grenada from October 21st to 22nd, 2011.

The facilitator was Mr Dennis Lord, Executive Director of Inventory Management Solutions (IMS) Consultancy of Canada and some 26 persons from CAWASA member-utilities attended the workshop.

The objective of the meeting was to secure proper methods for stores invenmtory management and procurement with the there: "Right Parts, Right Quantity, Right Place, Right Time!"

Another objective was to improve operating

performance, efficiency and effectiveness with the latest techniques for procuring, storing and replenishing inventory.

Participants also learned skills to reduce shortages, stock-outs and improve daily performance. This workshop also helped participants better understand the purchasing cycle, as well as strategic purchasing, planning and replenishment of inventory. It covered all activities from the purchase requisition to the best methods for receiving and storing parts.

In addition, participants reviewed tools and techniques for right-sizing inventory to better manage storeroom service and costs.

#### WASCO hosting Effective Utility Management and Governance workshops

St. Lucia's WASCO is one of several regional, utility companies participating in a series of Effective Utility Management (EUM) workshops being held in various territories.

WASCO's Public Relations Consultant Clinton Reynolds says the ongoing course "involves nine modules, of which three have been completed" at the island's Bay Gardens Hotel in Rodney Bay.

He says the workshops "are being led by Ca-

nadian experts" and the continuing series "is aimed at preparing utility managers across the CAWASA's Caribbean portfolio to better manage and govern their individual entities and engage in collective actions of mutual interest."

The latest of the local workshops was attended by Public Utilities Minister Dr Jimmy Fletcher, as well as by CAWASA's Executive Director, Mr Victor Poyotte.

# Annual Caribbean Water Conference briefed by CAWASA on Global Partnership Alliance

The Caribbean Water and Wastewater Association (CWWA) held its Annual Conference in Gosier, Guadeloupe from October 2nd to 7th 2011. At that Conference, Executive Director Victor Poyotte made a three-part presentation on behalf of the Global Water Operators Partnership Alliance (GWOPA).

The Executive Director introduced GWOPA, explained the main role and functions of the organization at the international level and in the Caribbean region, and outlined features of the new GWOPA website.

He also discussed the methods used by GWOPA to conduct training and the various types of training implemented in different regions of the world. Also included in the presentation was a description of the GWOPA Charter as a non-profit organization and a Code of Conduct.

The presentation provided conference participants with an overview of the Caribbean Water Operators Partnership (CARIWOP).

It also gave details of how CARIWOP operates within the framework of the Water Operators Partnership for Latin America and the Caribbean (WOP-LAC) with support for the implementations of its annual work plans and projects.

# The 6th World Water Forum In Facts and Figures

More than 600 volunteers participated in the activities before and during the week of the Forum, which also featured around 20 high level meetings, a Ministerial Conference, a Parliamentary Conference and an International Conference of Local and Regional Authorities for Water, which all took place March 14 to 15, 2012.

several Caribbean water utilities attended the 6th World Water Forum, which took take place at the Parc Chanot in Marseille, France, from March 12-17.

Described as "A Forum of Solutions", it was planned to be a major step towards solving the problems linked with water and sanitation access the world.

The Forum also considered questions relating to energy and water resource management in the face of Climate Change, as well as Food Security and Assisting the Poorest Populations.

More than 2,000 experts prepared papers they presented under themes such as "Water & Energy", "Water & Health", "Water & Food" and "Water & Cities", out of which participants listed 12 priority action areas.

The France Forum was also a preparatory step for the United Nations Conference for Sustainable Development "Rio + 20", which will take place June 20-22 in Rio de Janeiro, Brazil.

The Forum discussed the program that came out of three years of coordination of the political, thematic, regional and civil society processes on the major questions of access to water and sanitation.

The conference also featured two public debates mixing points of view and actors on

major questions and broadcast on the Internet website (worldwaterforum6.org). The debates were on "Private/Public Involvement in the Provision of Water and SanitationServices" and "Increasing Resilience to Climate Change: What is the Role of Water Storage?"

The Forum hosted 12 high-level round-tables on such issues as Funding of Infrastructure, Green Economy, Trans-boundary Waters and Water & Health. There were also nine high level panels on issues including Nexus Water, Food & Energy, Water & Food Security, Right to Water, World Water Governance.

Also featured were six "trialogues" on Africa, Americas, Asia-Pacific, Europe, Mediterranean and Arabic countries, as well as five special sessions on: Water Scarcity in Arid Areas, Water Storage and Sustainable Development, Water and Future of Humanity, Water & Spirituality and Water in Western USA.

The Forum hosted 15 multi-stakeholder sessions on implementing the right to water and sanitation, good governance and sustainable financing.

The first worldwide exhibition of water and sanitation access solutions also took place at the forum, featuring activities and events to raise the audience's awareness on the stakes of water.

These included the worldwide exhibition with the theme "Innovation: the Village of Solution" which showed seven different universes -- the Library, the Agora Café, the Factory, the Bank, the School, the City Hall and the Slum -- all providing examples of potential solutions in the field of access to water and sanitation.

The Forum also featured some thirty international pavilions, 140 labeled "Grassroots & Citizenship" events and projects mobilizing the Civil Society.

The Forum was attended by 140 ministerial delegations and more than 80 ministries, more than 800 hours of exchange and debates, 600 organisations (including many NGOs) attending 160 workshops; and more than 2,000 persons were involved in preparatory work.

In addition, some 1,800 young people from 6 to 35 years old, students or young professionals, active for several months through many initiatives (ex-World Parliament of the Youth) also attended.

More than 600 volunteers participated in the activities before and during the week of the Forum, which also featured around twenty high level meetings, a ministerial conference, a parliamentary conference and an International Conference of Local and Regional Authorities for Water, which all took place March 14 to 15.

More than 300 sessions were dedicated to finding the solutions to take up the challenges of water around the world and those issues were discussed at about 100 parallel conferences; there were 180 "Grassroots & Citizenship" events and projects to get the Civil Society involved among which 140 at the moment of the Forum.

# Guadeloupe hosted Caribbean Utilities ahead of World Water Forum



The French-speaking island of Guadeloupe hosted the 20th Caribbean Water and Wastewater Association (CWWA) conference and exhibition last October in the resort town of Gosier.

CAWASA's Executive Director Victor Poyotte and representatives from more than 45 countries descended on the French-speaking Caribbean island for the CWWA's annual meeting (October 2-7, 2011) as well as for the island's 10th annual celebration of "The Water Days", which coincided with the meeting.

This combined event was said by the organizers to have "reinforced Caribbean links, promoted the sharing of expertise and consolidated partnership agreements between the nations of the region in the water, sanitation and waste management sectors."

The meeting was jointly organized by Syndicat Intercommunal d'Alimentation en Eau et d'Assainissement de la Guadeloupe (Guadeloupe's Inter-

Urban District Union of Water Supply and Sanitation) in partnership with Syndicat Intercommunal du Centre et du Sud de la Martinique

(Inter-Urban District Union of Central and Southern Martinique) and Communauté de Communes du Centre Littoral de Guyane (French Guyanese Community of Municipalities for the Central Coast).

It was also attended by participants from the United States, Canada, Latin America and Europe, as well as from countries and territories in the Indian Ocean and the Pacific.

"Legislative Procedures and Regulations in the field of Water Sanitation and Waste Management", the "State of Networks in the Caribbean Region", and "Financial Management of Waste and the Recovery of Rain Water" were among the principal topics debated under the theme "Caribbean Cooperation: The Future of Water and Waste Management in the Region".

Secondary and university students took part in both academic and recreational elements of the event, in partnership with Université des Antilles et de la Guyane (UAD), while there were also discussions to prepare a united Caribbean presentation for the 6th World Water Forum in Marseilles, France from March 12 to 17, 2012.

# St. Lucia Government wants Joint Public/Private Sector Bailout for WASCO

he St. Lucia Water and Sewage Company (WASCO), is eyeing a return to profitability within five years – if it gets the EC \$51 million it needs now to bail itself out of its ocean of debts.

Following public statements by the island's new Public Utilities Minister Dr James Fletcher and new Board Chairman Egbert Louis after meetings of the company's new Board of Directors, company officials have been expressing optimism about the future viability of the island's lone water company.

The new board has outlined several new initiatives to be undertaken to restore the island's water services to normal capacity and General Manager John Joseph earlier this year outlined a five-year WASCO revival plan.

Dr Fletcher met several times with the cashstrapped utility company during the first quarter of this year and pledged his fullest support for its resurrection. But WASCO continues to be beset by serious financial problems that have anchored it over many years.

The company's financial situation has always been bad, but got much worse following Hurricane Tomas in October 2010, which filled the Roseau Dam with one-third silt and robbed it of 230 million gallons of storage capacity. Overall, Tomas visited \$20 million worth of damage on the island's water system. But, two years later, only \$3 million has been spent repairing the hurricane's damage.

Customers still spend more buying bottled water than paying bills – and even some government bills are allowed to run high. For example, the Beausejour Cricket Ground (BCG) owed \$603,000 since mid-2011, until WASCO disconnected the national cricket stadium and got paid in January 2012. At the same time, WASCO itself owes LUCELEC (the electricity company) close to \$7 million.

Joseph says the company's "government debt" now stands at approximately \$100 million (70% principal, 30% interest) and immediately needs \$10 million for operating costs.

The company returned to profitability after water rates were doubled in 1999, but it continued to be financially strangled over the years after being saddled with the cost of the multi-million-dollar Sir John Compton Dam at Roseau, built by government with a large Canadian loan several years ago.

It became a limited liability company in December 2002, with Government remaining the only shareholder. Then in 2005 Government decided to invite private sector participation through privatization and international bids were invited and considered, but general elections at the end of that year and the subsequent death of Prime Minister Sir John Compton stalled the process.

The privatization process resumed in April 2008 with two major international companies bidding, but the controversial process was aborted by the government in December of that year after one of the two companies threatened to go to court over a technicality.

But the current administration has taken privatization completely off the table, with Dr Fletcher indicating there will be no foreign capital injection sought by way of sale of assets. Instead, he said, the government will seek a Public/Private Sector Participation approach that will involve only local firms.

"WASCO must change from its current unsustainable model," of depending on water bill payments and other traditional sales of water while remaining in perennial debt, the minister said, adding, however, that whatever privatization model is chosen "will also have to protect the right of the vulnerable and disadvantaged to access to water."

Noting that "WASCO has problems ranging "from dam to distribution," the minister said a situation could not continue whereby "WASCO always has to depend on the government for support.

The local private sector -- especially businesses and hotels, long suffering from their own water woes - has repeatedly indicated interest in a rescue mission of sorts for WASCO and they say they are still prepared to help bail the water company out of its money woes.

The renewed private sector interest has been welcomed by Chairman Louis. "It's almost imperative that the private/public participation model must come into place," he said, "as there is no way that the government, in the present situation, will be able to take WASCO through the problems it has right now."

Those calling for change have been arguing that the company should modernize and venture into



**Public Utilities Minister Dr James Fletcher** 

more profitable water business -- such as bottling water, which is a continuously growing business on the island.

In the first quarter of 2012, the company engaged in readjustment and realignment, revisiting past policies, examining current realities and planning for the future. Much attention was given to restoring capacity in areas most damaged in both urban and rural areas, with periodic shut-downs to facilitate vital repairs and changes.

The company has also been taking early steps this year to avoid a repeat of the Hurricane Tomas siltation experience at the Roseau Dam -- which could hasten a shortage of drinking water in the northern half of the island within six weeks of a drought -- advocating measures for and encouraging water conservation practices ahead of a possible dry season.

There's much expectation that whatever new model is under consideration will result in a common plan that would rescue WASCO from its ocean of debts and restore the confidence of customers and consumers in its ability to rescue itself from its ocean of money problems and the country from its remaining water woes.



Change agents want to see customers paying for more than just water at WASCO

### No VAT on St. Lucia water bills!

Saint Lucian consumers of life's most precious resource have been guaranteed they will be spared paying value Added Tax (VAT) on water when the new tax takes effect in September.

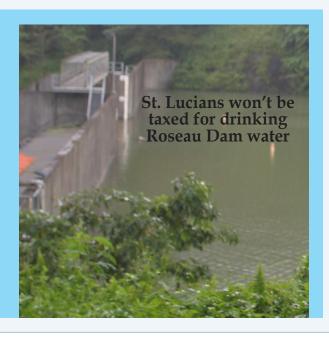
Prime Minister Dr Kenny D. Anthony, who is also Finance Minister, has repeatedly assured consumers that water and electricity will not attract VAT, as they will be the first on the list of 'zero-rated' items that will be Vat-free.

Dr Anthony, as leader of the opposition, had assured the st. Lucia chamber of Com-

merce during the 2011 general elections campaign that should his party win, water would be minus VAT.

The tax will be implemented in September and the Prime Minister was expected to announce the other zero-rated items in his 2012-2013 Budget Address on May 8th.

The Prime Minister said while the state needed every cent it could collect by way of taxes, he did not want "to impose any extra or unnecessary burden on consumers, who are already feeling the economic squeeze."



## CReW Expert calls for Better Management of Caribbean Waste Water

he Global Environment Facility Caribbean Regional Fund for Wastewater Management (GEF CReW) held its Inception Workshop at the Terra Nova Hotel in Kingston, Jamaica from 7 to 8 February 2012, where a serious case was made for Reforming Wastewater Management in the Caribbean.

The workshop was organized by the Interagency Coordinating Group (IACG) comprising the Inter-American Development Bank (IDB) and the United Nations Environment Programme (UNEP).

Denise Forrest, Project Coordinator for the GEF-CReW, highlighted the current challenges facing wastewater management in the Caribbean and made a strong case for regional reform.

Degradation of the Caribbean marine environment (including through the discharge of untreated wastewater) is a serious concern for those countries whose livelihoods depend heavily on their natural marine resources.

A recent study on the Caribbean Sea Ecosystem Assessment (CARSEA) found that "sewage pollution from land sources and from ships has been the most pervasive form of contamination of the coastal environment." It also found that sewage was one of the main factors that had caused some 80% of living coral in the Caribbean to be lost over the past twenty years.

Damage by untreated wastewater to the marine environment, including living coral, can bring about severe economic consequences for the Caribbean.

The CARSEA study found that "the Caribbean is the region in the world most dependent on tourism for jobs and income," while "fishing is also a significant source of both income and subsistence." Yet, both sectors are directly threatened by environmental degradation, partly due to wastewater discharge.

The potential economic harm to the region from further damage to the marine environment is enormous. There is, therefore, urgent need to increase wastewater treatment in the Caribbean, which at present is far below needed levels.

UNEP/GPA estimates that as much as 85% of wastewater entering the Caribbean is currently untreated. Within Caribbean Small Island Developing states (SIDS), less than 2% of urban sewage is treated before disposal; and even lower in rural communities.

On some islands (e.g., Antigua and Barbuda, Dominica, Haiti) there is no sewerage system and sewage is disposed mainly through septic tanks and pit latrines, many of which do not comply with minimum technical specifications or are not adequately maintained.

Indeed, as a result of rapidly expanding populations, poorly planned development and inadequate or poorly designed and malfunctioning sewage treatment facilities in most Caribbean countries, untreated sewage is often discharged into the environment with serious human and ecosystem health implications.

The discharge of sewage from many tourism facilities also results in serious health, environmental and economic impacts. But while countries increasingly recognize the importance of improving wastewater management, obstacles still exist, especially financial constraints: lack of adequate, including affordable financing for investments in wastewater management...

At least six of the thirteen member utilities of CAWASA have a legal mandate to provide public wastewater sewerage services. But, to date, only Antigua & Barbuda, Barbados, Saint Lucia and St. Vincent & the Grenadines have endorsed the CReW project.



The Report says discharge of sewage from many tourism facilities results in health, environmental and economic impacts.



As a result, the Antigua Public Utilities Authority (APUA), the Barbados Water Authority (BWA), the Saint Lucia Water & Sewerage Company (WASCO) and the Central Water & Sewerage Authority (CWSA) are the only member

utilities likely to benefit directly from projectrelated activities.

Thus there's a great and urgent need for reforming Caribbean Wastewater management throughout the Caribbean.

# Privatization breeds Corruption and Exploitation

### Water multinationals admit they cannot deliver to the poor

The Government of St. Lucia has taken privatization of the island's lone water company off the table. Similarly, most Caribbean governments have resisted invitations or recommendations to completely privatize or give majority interests to overseas investors to raise needed capital, as there are numerous international examples of privatization not being the panacea for all water problems.

International entities with the public interest in mind have long been offering both examples and reasons why privatization mostly fails in developing countries where the companies are simply delivered into foreign multinational corporations' hands.

Public Services International (PSI), for example, has always been concerned that World Summits on Sustainable Development (WSSDs) have not come out strongly enough against water privatization, especially in developing countries.

Ten-year-old findings by the PSI's Research Unit (based at the University of Greenwich in London) reveal that multinationals privatizing water in the developing world are usually "dogged by corruption, close to financial collapse and have long track records of exploiting the poor."

PSI has long indicated its list of concerns about privatization processes in developing countries being hijacked by just a couple multinational companies, with the support of institutions based in the developed world.

The world water business is dominated by the

two largest French multinationals, Suez and Vivendi, which, between them, hold about 70% of the international privatized water business.

Both were warned of "anti-competitive behavior" in France as far back as July 2002, when the French competition council ruled that they had been abusing their market dominance in France, where they control 85% of the private water.

The two companies have created joint subsidiaries in 12 areas, sharing the profits of a water concession instead of competing against each other.

The council noted that scores of projects were being rendered "uncompetitive" by the groups' mutually colluding behaviour.

In January 2002, J. F. Talbot, CEO of SAUR International (the fourth largest water company in the world) told the World Bank that the private sector could not deliver for the poor.

He said the private sector did not have the financial capacity: "The scale of the need far outreaches the financial and risk taking capacities of the private sector."

He also said that developing countries were unrealistic in attempting to adopt European standards such as the demand for "connections for all", even though the multinationals that privatize always cite their good track record in that respect in Europe.

Talbot rejected the possibility of cost recovery from users, saying that in developing countries

"service users can't pay for the level of investments required for social projects, and even the US and Europe subsidize water services."

He concluded that without subsidies and soft loans from governments (which say they don't have the money so they have to privatize) there is no scope for privatization of water by multinationals

The PSI's research found that "The economic function of a bribe is to provide a financial inducement for an official/politician/public authority to act in the interests of the company rather than the public interest which he/she/it is supposed to represent."

The research concluded that:

- The multinational corporations' interest in water and sanitation services is defined purely by their shareholders interest, their return on capital and the risks involved.
- Governments of developing countries need to examine the true long-term costs of giving the corporations protection from currency risks, political risks and demand risks. There needs to be a public process of comparing any private proposals with public alternatives, as part of an open public debate.
- There remains a constant danger that extending privatization will extend the opportunities for corruption.

(The above article relies heavily on an original paper. The full PSI report can be viewed at <a href="http://www.psiru.org/">http://www.psiru.org/</a>

### Vincentians contributing more to cost of Water and Solid Waste Services

onsumers in St. Vincent and the Grenadines are paying more for water and solid waste services.

The Central Waters and Sewage Authority (CWSA) announced in January that the increases would have been announced in February and made effective March 2012.

The basic water charge for domestic consumers increased by EC\$2.00 to \$14.00 per month and commercial consumers are now paying \$125.00 per month. The new basic domestic rate is \$6.50 per 1,000 gallons, while the new sewerage rates are \$20.00 per month in Arnos Vale and \$30.00 in Kingstown.

Garth Saunders, CWSA's Chief Executive Officer, had earlier said monthly bills would increase based on usage.

"We are cognizant of the fact that everything else is going up but all those things that are also going up are affecting the CWSA and we hope that the consumer will see that," he told a media conference held to announce the price hikes.

He added, "We are about serious business and we want to assure our customers that we will be doing our best, as we always do, to pro-



The water company, CWSA, says it needs more cash to invest in more water projects to benefit more consumers across the multi-island state

vide good quality service and we hope that this increase is not burdensome on you."

The previous rate hike sanctioned by the government took effect in 2007.

Saunders said the company's revenue declined between 2003 and 2007, and remained stagnant over the last three years.

The CWSA boss said management intends to closely monitor expenditure, while financing capital projects.

"We want the projects to improve water quality. We want the life of our landfills to be extended and we want our services at the landfills to be improved. We want our equipment to be running all the time because once our equipment is down and we have to rent equipment, it's a serious burden for us," Saunders said.

The authority has spent in the region of EC\$10.8 (US\$3.9) million on capital projects so far

### Science & Technology Facilitates Water Being Life

# How Hotels and Businesses can Save and Recycle Water

## St. Lucia's Coconut Bay Project

Tith people everywhere still paying insufficient attention to the need to adapt to Climate Change, more creative ways and means are being used and stronger alliances are being created to drive the message home – including water conservation through appropriate adoptions of science and technology.

People across the Caribbean are being encouraged to return to the system of earlier generations who always collected rain and river water for non-drinking uses. Back then, people also practiced the boiling of rainwater for drinking. Today, they are also being encouraged to install water tanks to collect both potable (pipe-borne) and rain water, for everything from washing clothes and cars to cleaning floors and watering gardens.

But regional and international Climate Change adaptation advocates are pushing the envelope further. They want hotels and businesses that use lots of water to start putting science and technology to work to help save potable water and to put rain water to work where possible to save potable water for drinking, bathing and other healthy purposes.

In St.Saint Lucia, one local hotel has already joined hands with a government department in an internationally-funded, regionally coordinated project aimed at encouraging other hotels and businesses to do more to collect, save and recycle water – including both drinking potable and rain water.

Coconut Bay Beach Resort and Spa, located on the south-west coast of St.Saint Lucia, partnered last October (2011) in 2008 with the Sustainable Development and Environment Division of the then Ministry of Physical Development and the Environment, to officially and launch an initiative commemorated the completion of a water conservation initiative in October 2011 as part of a Global Environment Facility (GEF)/World Bank-funded Special Program on Adaptation to Climate Change (SPACC).

The joint private/public sector initiative is was locally driven by the government's Division and regionally executed through the GuyanaBelize-based Caribbean Community Climate Change Centre (CCCCC).

The Division's National Coordinator of the project, Ms. Dawn Pierre-Nathoniel, says that the project entails "the development of a Rainwater Harvesting and Upgrade Wastewater Treatment and Recycling Facility to promote water conservation and reduce the draw on the potable water supply, with benefits redounding to the adjacent community."

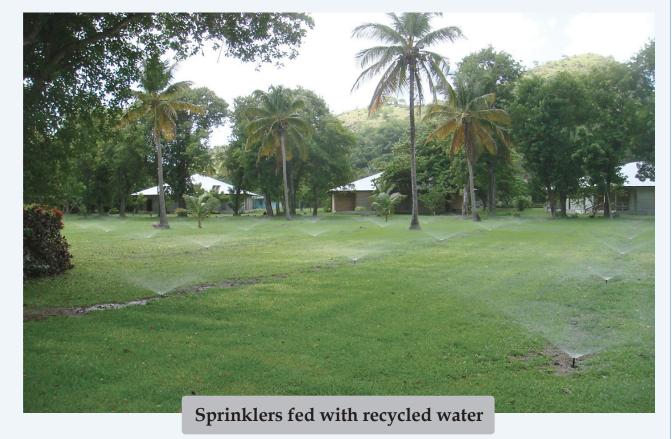
According to the official, "The facility is expected to enhance the awareness of hotel owners, managers, entrepreneurs and other relevant persons to the anticipated impacts of Climate Change, especially changes in water availability, and to demonstrate the application of cost-effective climate change adaptation responses, to encourage and promulgate adaptive replication by hotel owners, managers and other entrepreneurs."

The plan is for the Vieux Fort project to help come up with a list of guidelines for installation of water conservation systems as part of the Development Control Authority (DCA) requirements for new or expanding hotels and other commercial establishments on the island.

The hotel uses rain water for its pool topping and landscaping to sprinkle its lawns, allowing it to save more potable water for drinking, cooking, bathing and other personal uses.

According to Mrs Pierre-Nathoniel, "This effort by Coconut Bay and other hotels that have or plan to have such systems in operation for landscaping purposes, will help reduce the drain on the potable water supply."





### World Water Facts

#### **Continued from Page 2**

- Half of humanity lives in cities where urban population grows by two persons every second;
- Africa and Asia will see their urban populations double by 2020;
- The UN estimates that more than 3 billion people may suffer from water shortages by 2025.
- Only 8% of the world's fresh water is suitable for domestic consumption, whilst water consumption is growing twice as fast as the population increases;
- Up to three-quarters of the earth's surface is water, but less than 0.03% is drinkable;
- Less than 3% of the world's freshwater is available for human consumption;
- 1.2 billion people in developing countries lack access to safe sources of water;

# Global Water Operators Review Progress And Plan More 2012 Partnership Alliances



The city of Amsterdam hosted the world's water operators last November

epresentatives of global water operators attended the 4th Steering Committee Meeting of the Global Water Operators' Partnership Alliance (GWOPA) in Amsterdam, capital of the Netherlands, on November 1st 2011 to coincide with the Amsterdam International Water Week.

The meeting was hosted by WaterNet and WordWaterNet and a large majority of the Steering Committee member-organizations were represented at the meeting, with strong attendance by regional platform representatives.

The meeting was opened by Mr. Bert Diphoorn of UN-HABITAT, (Chair of the Global Water Operators' Partnerships Alliance Steering Committee) and by Mr. Gerard Rundberg (Director of WordWaterNet), who welcomed participants with brief remarks and called for a short round of introductions by participants.

Mr. Diphoorn gave a brief update on UN-Habitat, explaining that the Agency has had a change in leadership and is undergoing a significant restructuring process. This process, combined with reduced financial resources to the Agency's water programmes, may have consequences for the operations of GWOPA.

Mr. Diphoorn noted that this year (2012) would be critical for the GWOPA, as the program continues to seek funding beyond December 31st, when its current funding from the Abu Dhabi Water and Electricity Authority will cease. The meeting also discussed the GWOPA Secretariat Annual Report (September 2010-November 2011).

GROPA Secretariat Report - Dr. Faraj El-Awar, GWOPA Programme Manager, reported on progress of Secretariat activities since the last Steering Committee meeting. She said the GWOPA Secretariat's focus "has shifted in 2011 from direct sup-

port for WOPs implementation within the regional processes, to investing in efforts that serve the ensemble of WOPs platforms and bolster WOPs globally." Part of this effort went to building the case for WOPs.

In October 2011, the Global WOPs database was launched to assemble records of WOPs from around the world. The database will allow for better understanding of current practices and inform good partnership design. The online WOPs profiles also give greater visibility to the practice of WOPs and help implementers learn from others' experience.

Recognizing financing as a barrier to WOPs implementation, GWOPA has also been working to garner more funds for the practice. Notably, it recently joined efforts of the UNDP-led "International Platform for the Promotion of Decentralized Solidarity Mechanisms for Water and Sanitation" (or "The 1% Water and Sanitation Solidarity Levy") that aims to universalize legal mechanisms, such as those currently active in France and the Netherlands, which enable utilities to apply 1% of their revenues towards decentralized cooperation and international solidarity efforts.

In March, GWOPA organized its first Global WOPs Congress. The two-day long meeting, held in Cape Town, coincided with World Water Day celebrations on the theme of "Water for Cities" and brought together over 150 WOPs practitioners and supporters from all over the world. It was the first time such a mass gathering of WOPs enthusiasts had convened at the global level -- and it was a unique moment of exchange and learning. GWOPA also held its first General Assembly in Cape Town, during which half of the Steering Committee members were replaced.

This year, GWOPA made the most of its Alliance of partners to co-organize events and include WOPs issues in training workshops. In Latin America, GWOPA contributed to the organization of the workshop on "Strategies for the Extension of WATSAN Services in Slum Areas in LAC"; and it helped WOP-Africa host two workshops on non-revenue water for African utilities. The first was on "Customer Management in Water Services in Developing Countries" in Ouagadougou, Burkina Faso and the second was on "Industrial and operational solutions for NRW reduction," held in Dakar, Senegal.

As a follow-up to training on Water Safety Plans (WSP) held in Johannesburg in 2009, GWOPA facilitated a visit of experts from RandWater to utilities of Nairobi, Kenya and Harar, Ethiopia.

GWOPA also promoted the integration of a training module on Water Safety Plans in the Master OpT program in Montpellier, France, which targets utility managers from developing countries.

The Secretariat's budget was about US\$1.2 million for 2011, mainly from the Abu Dhabi Water and Electricity Authority (ADWEA) and the Catalan Agency for Cooperation for Development (ACCD), via the UN-HABITAT Water and Sanitation Trust Fund. The meeting also heard updates from Regional WOPs Platforms.

WOP Pacific Report - The report on WOPs in the Pacific was presented by Kisa Kupa, who indicated that the WOP-Pacific is now well established under the Pacific Water and Waste Association (PWWA), with an executive committee and five sub-committees on various technical and environmental issues.

Continued on Page 12

# Global Water Operators Review Progress and Plan More 2012 Partnership Alliances

#### Continued from Page 11

Since its launching in 2010, the platform has conducted a regional benchmarking exercise and has held a regional conference. Seed funds have allowed for a few WOPs to be initiated, but the WOP-Pacific platform is actively seeking more funding to carry out more and to sustain the management of the platform itself, as its coordinator is currently working on a voluntary basis.

This year (2012), the platform will seek more systematic support from the Asian Development Bank (ADB) to continue facilitating WOPs identified through its first match-making workshop. The platform will also support operators of the region to continue benchmarking and develop capacity in Asset Management. A memorandum of understanding with GWOPA/UN-HABITAT is in preparation.

WOP South East Europe Report - The report on the WOP-SEE (South East Europe) was tabled by Dragana Gajic, who indicated its Secretariat now has a Programme Coordinator engaged with support from GWOPA. Several short-term WOPs have also been launched, initiated by Romanian and Serbian operators for partnership in Croatia, Moldova, Hungary and Bulgaria.

GWOPA has supported the drafting of a threeyear business plan for the WOP-SEE platform, which, following review and adoption by the WOP-SEE Steering Committee in November 2011, will be used to mobilize longer-term funding for regional WOPs activities.

WOP Caribbean Report - The Cari-WOP (Caribbean) update was presented by CAWASA's Program Officer Suzanne Joseph, whose platform gathers utilities from the countries of Anguilla, Antigua & Barbuda, Bahamas, Barbados, Belize, the British Virgin Islands, Cayman Islands, Dominica, Grenada, Haiti, Jamaica, Montserrat, Nevis, St Kitts, St Lucia, St Vincent & the Grenadines, Trinidad & Tobago, as well as Turks & Caicos Islands.

These utilities are members of both the Caribbean Water and Wastewater Association (CWWA) and the Caribbean Water and Sewerage Association (CAWASA), the two regional associations that collaborate to implement Cari-WOP activities through a memorandum of understanding.

The two associations are involved in coordinating training and networking for utility employees, conducting technical research, benchmarking and advocacy for sector reform. The Inter-American Development Bank (IDB) and UN-HABITAT are both providing some support to the platform through the WOP-LAC platform.

In 2011, Cari-WOP supported a twinning arrangement between the Belize Water Services Ltd and Contra Costa Water District of California, USA (financially supported by GWOPA) and conducted training in Corporate Governance and Water Safety Planning in parallel with CWWA Conference (Guadeloupe – October 3-7, 2011).

The greatest priorities for Cari-WOP in the current period, said Mrs Joseph, are, "Conducting training on water demand management, water services regulation, water use and energy efficiency, sewerage connection and treatment supporting the implementation of the twinning proposal between the Montserrat Utilities and the St Lucia Water & Sewerage Company (WASCO), as well as at least two others WOPs conducting a benchmarking exercise.

WOP Latin America Report - The WOP-LAC (Latin America) was delivered by Dr. Anne Bousquet on behalf of the WOP-LAC Secretariat. WOP-LAC was established in 2008 with a Secretariat run jointly by the Inter-American Development Bank (IADB), UN-HABITAT and IWA. Its Steering Committee is comprised of eight operators: the Cari-WOP platform, IDB, UN-HABITAT/GWOPA and IWA.

WOPS have been supported in 2011, mainly with IDB funding. They include: Chile/Colombia,

Mexico/Paraguay and Chile, Jamaica/ Kentucky-USA, Dominican Republic/Colombia).

Workshops have been organized in 2011 on Corporate Governance, water safety plans, nonrevenue water, natural disasters, condominial sanitation systems and tariff structures.

WOP Africa report - The WOP-Africa Report was presented by Mouhamed Fadel Ndaw, who indicated WOP-Africa was established in 2007 and it is a program of the African Water Association (AfWA). Its Steering Committee is comprised of representatives of public and private operators, water associations and development partners such as GWOPA/UN-HABITAT and the Water and Sanitation Program of the World Bank in Africa (WSP-Africa).

WOP-Africa has secured funding for its three-year business plan -- US \$3.8 million from US Agency for International Development (USAID) and African Development Bank's (ADB) African Water Facility -- and has recently recruited a new Program Coordinator. A Program Officer and an accountant will also support the Coordinator in Johannesburg, where the Secretariat will be hosted by RandWater.

In 2010 and 2011, in response to WOP- Africa's first call for proposals, three new WOPs were initiated: the National Water and Sewerage Company of Uganda and Ogun State Nigeria; Senegalise des Eaux of Senegal and Regidiso of the Democratic Republic of Congo, SWAZI Water of Swaziland and KAFUBU, Zambia).

WOP-Africa has also contributed to technical workshops with other partners and to the second region-wide benchmarking exercise led by WSP/World Bank with GWOPA support in 2010-11. With ADB and USAID funding now available, the platform will take on another twelve WOPs identified through the call for proposals and currently in preparation.



CAWASA's representative and water operators from around the world listened attentively to reports on happenings in every corner of the globe