Draft Report on Centre of Excellence
Institutional and Organisational Strengthening of WASCO - SAINT LUCIA

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Draft Report on Centre of Excellence
Institutional and Organisational Strengthening of WASCO Saint Lucia and Regional Water Utilities

Saint Lucia

November 2019

JOINT VENTURE
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<th>Abbreviation</th>
<th>Full Form</th>
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<tbody>
<tr>
<td>ABC</td>
<td>Association for Boards of Certification</td>
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<tr>
<td>AWWA</td>
<td>American Water Works Association</td>
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<tr>
<td>CAH</td>
<td>CONSULAQUA Hamburg BeratungsgesellschaftmbH</td>
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<tr>
<td>CARICOM</td>
<td>Caribbean Community and Common Market</td>
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<td>CARPHA</td>
<td>Caribbean Public Health Agency</td>
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<td>CATS</td>
<td>Caribbean Aqua-Terrestrial Solutions</td>
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<td>CAWASA</td>
<td>Caribbean Water &amp; Sewerage Association Inc.</td>
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<td>CD</td>
<td>Capacity Development</td>
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<td>CoE</td>
<td>Centre of Excellence</td>
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<td>Como</td>
<td>Como Consult GmbH</td>
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<td>COP</td>
<td>Community of Practice</td>
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<td>CS</td>
<td>Customer Services</td>
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<td>DVS</td>
<td>Data Validity Score</td>
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<td>GIS</td>
<td>Geographic Information System</td>
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<td>GIZ</td>
<td>Deutsche Gesellschaft für Internationale Zusammenarbeit GmbH</td>
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<tr>
<td>HM</td>
<td>Hydraulic Modelling</td>
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<td>HR</td>
<td>Human Resources</td>
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<td>HW</td>
<td>HAMBURG WASSER</td>
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<tr>
<td>ISO</td>
<td>International Organisation for Standardisation</td>
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<td>KPI</td>
<td>Key Performance Indicator(s)</td>
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<td>M&amp;E</td>
<td>Monitoring and Evaluation</td>
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<tr>
<td>NRW</td>
<td>Non-Revenue Water</td>
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<td>NURC</td>
<td>National Utilities Regulatory Commission</td>
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<td>O&amp;M</td>
<td>Operation and Maintenance</td>
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<td>OD</td>
<td>Organisational Development</td>
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<td>PC</td>
<td>Project Coordinator</td>
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<td>QMS</td>
<td>Quality Management System</td>
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<td>SOP</td>
<td>Standard Operating Procedure(s)</td>
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<td>STA</td>
<td>Strategic Alliance for Water Loss Reduction</td>
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<td>ToR</td>
<td>Terms of Reference</td>
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<td>ToT</td>
<td>Training of Trainer(s)</td>
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<td>TOM</td>
<td>Total Quality Management</td>
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<td>WASCO</td>
<td>Water and Sewerage Company Inc.</td>
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1. **Introduction**

The project “Institutional and Organizational Strengthening of WASCO Saint Lucia and Regional Water Utilities” started on the 1st of November 2018 and will have a duration of 13 months. It is carried out by a joint venture between CONSULAQUA Hamburg and COMO Consult from Germany. The firms VAG and SEWERIN are involved as sub-consultants for the project.

The project is part of the Caribbean Aqua-Terrestrial Solutions (CATS) programme, which is implemented as collaboration between the Caribbean Public Health Agency (CARPHA) and the “Gesellschaft für Internationale Zusammenarbeit” (GIZ) of Germany. The programme’s donor agency is the German Federal Ministry of Economic Cooperation and Development.

By supporting WASCO and water utilities in other countries in the Region, the CATS Programme aims at the sustainable and efficient use of water resources and increasing resilience against climate change. The project objectives are presented in figure 1 below.

![Figure 1: Project Objectives](image)

Task A.3.4 of the ToR of the project Institutional and Organizational Strengthening of WASCO Saint Lucia and Regional Utilities requires the consultant to

“Develop proposals for the establishment of a regional Centre of Excellence/Competence Centre in Saint Lucia for the CARICOM Region to integrate a “Training of the Trainers” in the

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The CATS countries include Saint Lucia, Grenada and Dominica, which are the three focal countries, and also Belize, Jamaica, St Vincent and the Grenadines, St Kitts and Nevis and Guyana.
regional structure of water utility service providers, including identification of instruments and required support from local/regional entities to ensure a self-sustaining operation”.

According to the ToR, this activity will result in the development of a Training of Trainers concept together with regional stakeholders, including a capacity needs assessment workshop on requirement, objectives, thematic focus, etc. of the regional CoE; development of a proposal to be submitted at the regional level.

Early in the project it was decided for this topic to closely involve and work with the Caribbean Water & Sewerage Association (CAWASA), being the regional organization of Water and Wastewater Utilities in the Caribbean Region and having its basis in Saint Lucia. During the first months of the project several meetings took place with the Executive Director of CAWASA and staff of GIZ to define the scope of this activity. In addition, in August 2019 a questionnaire was circulated through CAWASA among CEO’s of CAWASA’s member water utilities.

2. Objective

The objective of this report is to present a strategy and roadmap for the establishment of a Regional Centre of Excellence (CoE), which supports training and the development and sharing of knowledge and experience for water professionals in the CARICOM Region.

The initial scope of the proposed strategy will focus on the topic of NRW Reduction by training of trainers and supporting these trainers in sharing and further developing their knowledge among staff of water utilities. In later stages a range of other subjects will be taken up to widen the scope and services of the CoE.

3. CAWASA’s Current Activities on Training and Knowledge Sharing

3.1 General

CAWASA’s member utilities are: Antigua Public Utilities Authority (APUA); Barbados Water Authority (BWA); Water & Sewerage Department, British Virgin Islands; Water Authority of the Cayman Islands (WAC); Dominica Water & Sewerage Co. Ltd. (DOWASCO); National Water & Sewerage Authority (NAWASA), Grenada; Montserrat Utilities Limited (MUL); Nevis Water Department; Water Services Department, St Kitts; Water & Sewerage Company (WASCO), Saint Lucia; Central Water & Sewerage Authority (CWSA), St Vincent & the Grenadines; Public Works Department, Turks & Caicos Islands

Key functions of CAWASA, as presented on its website, include the following:

- **Staff Training & Development** (Management/Administration/Finance, Engineering/Technical); in this program CAWASA provides on-line training, podcasts and webinars. This program is limited in size and depends on the availability of resources.

- **Online learning**: CAWASA has initiated a training program for water system operators, which includes several online elements which participants can access in their own time. This two prong format, is expected to give participants the independence that is not possible in the face-to-face training, and also the personal interaction and presence needed for support and success in an online environment. The course is hosted on the Learning Management System MOODLE
which is accessible on any device available. This means, that participants can join from their mobile phones, PC’s and tablets at their convenience. Additionally zoom sessions allow for live interaction and discussion between peers and tutor. Course content is packaged in the form of videos, infographics some of which are downloadable at the convenience of the participant.

- **Certification Program** (Water Distribution, Water Treatment, Wastewater Treatments, Collection, Water Laboratory, Wastewater Laboratory, Very Small Water System, Small Wastewater System); in this program CAWASA closely collaborates with the Association for Boards of Certification (ABC) and organizations such as the American Waterworks’ Association and the Water Environment Federation.

- **Research** (Technical Studies, Operational Surveys, Rates and Tariff Studies/Surveys, Benchmarking)

- **Networking** (Conferences, Student Internship, Utility Twinning, Attachments) including the annual CAWASA conferences, which are organized for members each year.

### 3.2 The Strategic Alliance for Water Loss Reduction

Collaboration between CAWASA, WASCO and the Strategic Alliance (STA) for water loss reduction of Germany dates back to 2014, when a first fact-finding mission of the STA took place to Saint Lucia with WASCO. Since then NRW reduction teams from STA and WASCO have been active.

As part of these activities, a group of utility experts from the Caribbean participated in a WLR training in Hamburg, Germany. Energy efficiency and NRW-reduction trainings were conducted in Saint Lucia with involvement of CAWASA and the Sir Arthur Lewis Community College.

In 2016, a first Training-of-trainers (ToT) took place, facilitated by CAWASA and hosted by the Sir Arthur Lewis Community College. The ToT was a first step towards establishing an independent knowledge-pool on water loss reduction (WLR) in the Caribbean, consisting of several WLR trainers that went through the whole STA trainer recruitment program to achieve full certification.

In this proposal, the concept of establishing a center of excellence is further elaborated and the way forward is outlined. Hence the proposal can be regarded as a follow-up of the activities in 2016.
The Strategic Alliance

The Strategic Alliance for Water Loss Reduction (STA) is part of the “develoPPP.de” program implemented by GIZ on behalf of the German Federal Ministry for Economic Cooperation and Development (BMZ). Partners of the STA are:

- **HAMBURG WASSER**: Northern Germany’s largest public water supply and wastewater utility provides services to more than 2 million people with a NRW-rate below 5%.
- **SEWERIN**: Internationally operating group with long standing expertise in the development and production of electronic measuring & leak detection equipment.
- **VAG**: Highly experienced valve manufacturer, providing excellent quality products and consulting services for reliable solutions in network operations.
- **FHNW**: Through the Institute for Ecoentrepreneurship, the FHNW develops innovative technical environmental processes for sustainable resources management.

The STA aims at reducing water losses by improving technical and commercial management of existing water supply networks. The strategy comprises technical solutions and software as well as capacity development through provision NRW reduction trainings and training-of-trainers. Trainings are based on Guidelines for Water Loss Reduction, which are available in four different languages: www.waterlossreduction.com.

## 4. Proposed Strategy for creating a Centre of Excellence

### 4.1 Rationale

CAWASA is the regional organization for water utilities in the Caribbean. Most countries in the region only have one, relatively small, water utility, which operates rather isolated from peer organizations in other countries. As water utilities require rather specific knowledge and skills, it is not easy for these utilities to organize adequate training and education for their staff. CAWASA, as the regional umbrella organization, is ideally positioned to coordinate training and educational activities and act as a catalyst for sharing of knowledge and experience amongst professional staff working in its member utilities.

As resources for training and knowledge sharing are scarce, it does not appear to be feasible to establish an expensive physical Centre of Excellence. Instead, it is recommended to facilitate training-of-trainers and subject matter specialists and empower these persons to organize training locally and make use of web-based approaches in which participants join activities online. Local training helps to avoid expensive travel and making use of web-based approaches does not require utility staff to be in the same location. From time to time, CAWASA may make use of existing facilities in its member countries and link training activities to regional conferences or projects.

Because of the limits in available resources, it also does not appear to be feasible for CAWASA to develop the content for its training and educational programs by itself. Instead, it is recommended that use is made in a systematic and structured manner of knowledge and resources available in organizations. Knowledge and training programs are readily available at relatively low costs from many national water associations, universities and other networks, and for CAWASA and its members the
tapping of these resources is much more cost-effective as compared to developing materials and approaches themselves. It may, however, on occasions be necessary to adapt or re-organize materials to make it suitable for local training.

This approach requires much less financial investment, but it will be necessary that CAWASA and its member utilities invest in equipment and facilities that allow its staff to participate in web-based and online training programs and knowledge sharing activities. It will also require CAWASA to systematically develop its network among knowledge institutions in the water sector.

4.2 Proposed Strategy

Based on the assessment of the training needs of utilities and the limited availability of resources, it is suggested

"to establish a virtual Center of Excellence (CoE) for water professionals in the CARICOM region, which will be managed by CAWASA" and its member utilities, which aims at establishing a pool of trainers and subject specialists, and subsequently support these trainers and specialists in sharing their knowledge and skills among staff of water utilities in the region.

Establishing a CoE does therefore not mean creating another physical training institution. It means starting to build up a pool of certified CARICOM trainers and specialists in various subjects, who can offer training and share knowledge targeted to the needs of water professionals in the region.

The CoE will operate from the CAWASA office in Saint Lucia and heavily rely on three core (groups of) stakeholders:

a. **The Trainers and Subject Specialists** are at the core of the CoE concept and will make it work. They will form a virtual team of specialists in various subjects, trained and committed to sharing their knowledge and skills by delivering training, coaching and providing on the job support to their colleagues. However, they will need support in terms of organization and coordination.

b. **CAWASA** will be in a pivotal position by networking with other organizations in the water sector and with specific knowledge institutions such as universities and research centres, organize the ToT and provide support in knowledge sharing. In the proposed strategy, the process of developing and sharing of knowledge and skills will be moderated, facilitated and managed by CAWASA. Building on CAWASA’s experience with online – learning, optimal use will be made of web-based approaches, which are cost effective and allow for online communication and sharing of information.

c. **Utilities** will commit themselves to supporting CAWASA in identifying training needs and empowering and supporting the trainers and subject matter specialists in organizing training programs, coaching of staff and sharing of knowledge.

To kick off the establishment of the CoE, it is suggested to build on the experience of working with the Strategic Alliance for NRW Reduction (STA). This collaboration started in 2014 and lasted until 2016 but
will need to be further developed in order to yield effective results. The advantage is that the STA has developed the methodology and materials for the ToT approach. This part is explained in the next section. It may be necessary for CAWASA to obtain a certain level of technical assistance in establishing the CoE and a certified trainer is necessary to accompany, moderate and implement the certification of trainers.

In addition to NRW Reduction, there are several topics where training is necessary, e.g. Water Resources Management, Water Treatment, Network Management, Hydraulics, GIS, Metering, Climate Change Resilience, Energy Efficiency, etc. To ensure that the topics selected by the CoE align with the training needs of water professionals in the region, outlines of annual training programs will be developed in close collaboration between CAWASA and its member utilities based on identified training needs. The approach is that participants of the programs will be able to share their knowledge by conducting training courses themselves and coach their colleagues. Trainees in the courses will directly apply the newly acquired knowledge and skills in their day-to-day work.

The concept of a virtual and flexible CoE that can implement high quality training-of-trainers’ programs will be very cost and time efficient for member utilities. These trainers are subsequently available to train and share their knowledge with water professionals in multiple countries in the region and create synergies with other regional training organizations and bodies.

4.3 The Strategic Alliance for NRW Reduction – Approach and Methodology

To kick off the CoE, the trainer-pool on NRW Reduction shall be trained following a defined certification scheme that is outlined below. Implementation, facilitation and dissemination of qualified training programs shall be moderated by CAWASA. Training may take place in different locations and also in the respective utilities. Alternatively, use can be made of existing training institutions as e.g. the Sir Arthur Lewis Community College in Saint Lucia. Practical site visits and excursions are part of the STA training approach.

The consultant suggests that the CoE initially uses training materials developed by the STA. After the initial phase, when a set of trainers successfully completed the certification scheme, the CoE may further adapt and prepare its own training models and materials from the existing base of STA materials. Caribbean trainers who have already participated in the certification program may be instrumental in this.

4.3.1 Objectives and Curriculum of the STA - ToT Program

The Training-of Trainers (ToT) program is meant to enable the future CoE trainer team to deliver the modules of STA WLR training. The objectives of the ToT program are summarised as follows:
• Deepening of know-how in WLR and being able to pass this knowledge on to participants in the course of a training (WLR guidelines as technical background material)
• Enable future trainers to understand and experience the interactive training methodology, based on an experiential learning approach
• Enable future trainers to prepare, carry out and evaluate the modules for WLR training
• Enable participants to provide on-the-job training and support.

As described above, it is suggested to initially make use of existing training materials of the STA. The current standard technical training program on water loss reduction consists of five modules:

1. Understanding water losses:
   a. Significance (financial, ecologic and social) of water loss reduction
   b. Identification of key influencing factors
   c. An integrated perspective to water utilities
   d. Establishment of an IWA water balance
   e. Performance indicators
2. Information systems and hydraulic modelling for WLR:
   a. Information systems for WLR
   b. District metered areas and their design by means of hydraulic modelling (EPANET)
3. Methods and instruments for water loss reduction
   a. Introduction to methods & instruments
   b. Pressure management
   c. Active Leakage Control
   d. O & M - Organisation and documentation in leakage repair
   e. O & M - Asset Management
4. Module 4: Integrated approach for water utilities
   a. Introduction to the Integrated Approach - O&M for Decision Makers
5. Module 5 Action Plan

This modular approach allows customising the training for the specific needs of the target groups. The needs and interests of participants have to be explored beforehand in order to design an appropriate and adapted training program with case studies and examples selected from the existing ‘toolbox’ of exercises, presentations and practical experiences (e.g. site visits).

4.3.2 Basic requirements for future trainers

The STA concept requires the following qualifications and experience from the future trainers:

• Relevant education as engineers or technicians, natural scientists or economists in the water sector or longstanding practitioner in the drinking water sector;
• At least two years professional experience in water supply or a closely related field; specific experiences in NRW Reduction would be an advantage;
• Training skills and experience and a willingness to use interactive and participative methodologies. Training on this will be provided through the ToT program;
• Excellent language skills in English.
4.3.3 Standard Certification program for a CoE trainer

The certification scheme is meant to ensure the quality of the STA training programs. The stages of the ToT program are:

- **Step 0: Preparation** (reading the Guidelines)
- **Step 1: Basic ToT** (together with Kick-Off for CoE and joint principle/value finding) consisting of:
  - one day on interactive training as well as presentation and moderation skills,
  - participation in the complete 3-4 day technical training program and
  - one day training focused on the training methodology (rehearsals with feedback) and identifying further technical needs
- **Step 2: Self-assessment and coaching** consisting of at least two encounters/meetings with experienced trainers before, in between and after technical trainings and ToT elements.
- **Step 3: Co-training of at least two modules** of the technical training, based on prior technical background and experiences, to be followed by a qualified feedback from experienced trainers and other candidates and the identification of shortcomings to work on.
- **Step 4: Preparation, implementation and moderation of parts of the technical training**, followed by qualified feedback/evaluation by an experienced trainer and other candidates.
- **Step 5: Documentation of a training event** according to the workshop report format (see trainer manual), reviewed by the responsible experienced trainers.

Each of these 5 steps in the qualification process must be documented and followed up by a responsible experienced trainer from STA, in order to provide a sound and transparent basis for the certification.

4.4 Proposed Roadmap

Suggested steps for establishing the CARICOM Centre of Excellence are:

**Preparatory Stage (one year)**

1. Development of a detailed proposal for a CoE by CAWASA and its member water utilities
2. Discussion and decision-making process within CAWASA and its member utilities about the scope and activities of the CoE
3. Identify sponsors willing to support the CoE
4. Recruitment of staff at CAWASA to set up and manage the CoE program (see section 6.3)

**First year program – ToT in line with STA program**

5. Call for interested trainee trainers from among staff of CAWASA’s member utilities (recommended: a group of 10-15 persons)
6. Obtain commitment of utilities and trainees to undergo the ToT certification process and actively participate in promotion and delivery of training
7. Joint definition of principles and values of the CoE team (moderated workshop) and trainers at the Kick-Off and first ToT
8. ToT program for the first group of trainers (supported by STA)
9. Implementation of follow up training by trainers in their own countries and utilities (own, collaboration and exchange with STA)
10. Evaluate first year program and further enhancement, development of own training modules…

Second Year Program (Broaden the Scope)

11. Monitor and support follow up on training programs of year one
12. Identify training needs of utilities and prepare a training plan for year two
13. Obtain approval from CAWASA member utilities
14. Develop (or adapt) own ToT program and certification
15. Select and invite trainers
16. Implement ToT program
17. Implement follow up training
18. Evaluate and further improve (continuous improvement process)

5 Additional Instruments and tools for Sharing of Knowledge

Besides the formal training of trainers, it will be necessary to provide support to the pool of trainers and empower and enable them to share their knowledge and skills. In the next sections, several tools and instruments are described which CAWASA may consider in further developing its strategy for implementing the Centre of Excellence for its member utilities.

5.1 Communities of Practice

A Community of Practice (CoP) is a group of people who share a craft or a profession. A CoP can evolve naturally because of the members’ common interest in a subject or area, or it can be created deliberately with the goal of gaining knowledge related to a specific field. It is through the process of sharing information and experiences with the group that members learn from each other and have an opportunity to develop personally and professionally.

In many organizations, communities of practice have become an integral part of the organization structure. These communities take on knowledge stewarding tasks that were formerly covered by more formal structures. In some organizations there are both formal and informal communities of practice. There is a great deal of interest within organizations to encourage, support, and sponsor Communities of Practice in order to benefit from shared knowledge that may lead to higher productivity. Communities of Practice are now often seen as a means to capturing the tacit knowledge, or the know-how that is not so easily articulated.

2 Source: the general parts of this section have been copied from relevant texts on Wikipedia
CoPs can exist in physical settings, for example, a lunchroom at work, a field setting, a factory floor, or elsewhere in the environment, but members of CoPs do not have to be co-located. They form a “virtual community of practice, when they collaborate online, such as within discussion boards and newsgroups, or a “mobile community of practice” when members communicate with one another via mobile phones and participate in community work on the go.

Virtual COPs, where members collaborate and exchange information and experience on-line, would be a very suitable tool for an organization such as CAWASA, which has member utilities with more or less similar interests and structures spread over multiple countries. For example, one could easily imagine COPs around topics such as network management, water treatment, water resources management, NRW Reduction, procurement, HRM, customer services, etc.

It would be useful if such COPs would be supported by i) creating on-line platforms, ii) appointing a lead person (e.g. trainers), iii) provide logistic/administrative support, iv) create on-line storage facilities for documents, v) provide IT facilities that allow for organizing Video Conferences, Webinars, etc. In literature, there are several ways how to sponsor and support successful Communities of Practice:

1. Design the community to evolve naturally – Because the nature of a community of practice is dynamic, in that the interests, goals, and members are subject to change, CoP forums should be designed to support shifts in focus.

2. Create opportunities for open dialogue within and with outside perspectives – While the members and their knowledge are the CoP's most valuable resource, it is also beneficial to look outside of the CoP to understand the different possibilities for achieving their learning goals.

3. Welcome and allow different levels of participation – Normally, 3 main levels of participation are distinguished. 1) The core group who participate intensely in the community through discussions and projects. This group typically takes on leadership roles in guiding the group 2) The active group who attend and participate regularly, but not to the level of the leaders. 3) The peripheral group who, while they are passive participants in the community, still learn from their level of involvement. Wenger notes the third group typically represents the majority of the community.

4. Develop both public and private community spaces – While CoPs typically operate in public spaces where all members share, discuss and explore ideas, they should also offer private exchanges. Different members of the CoP could coordinate relationships among members and resources in an individualized approach based on specific needs.

5. Focus on the value of the community – CoPs should create opportunities for participants to explicitly discuss the value and productivity of their participation in the group.

6. Combine familiarity and excitement – CoPs should offer the expected learning opportunities as part of their structure, and opportunities for members to shape their learning experience together by brainstorming and examining the conventional and radical wisdom related to their topic.

7. Find and nurture a regular rhythm for the community – CoPs should coordinate a thriving cycle of activities and events that allow for the members to regularly meet, reflect, and evolve. The rhythm, or pace, should maintain an anticipated level of engagement to sustain the vibrancy of the community, yet not be so fast paced that it becomes unwieldy and overwhelming in its intensity.
8. Organize formal training to launch, run, and maintain community of practice. There are various organizations which provide 'Certified Communities of Practice Program Manager' and 'Certified Community of Practice Manager' certifications.

In summary, establishing and actively supporting COPs among staff of member utilities working in similar positions and dealing with similar issues appears to be a viable and promising instrument for the proposed CoE for sharing of knowledge and experience. Trainers trained under the ToT program could act as resource persons and coaches within such CoPs and use these as a platform for knowledge sharing.

5.2 Podcasts
A podcast is a series of digital audio or video files which a user can download in order to listen. Alternatively, the word "podcast" may refer to the individual component of such a series or to an individual media file. Podcasting often uses a subscription model, whereby new episodes automatically download via web syndication to a user's own local computer, mobile application, or portable media player.

The generator of a podcast maintains a central list of the files on a server as a web feed that one can access through the Internet. The listener or viewer uses special client application software on a computer or media player, which accesses this web feed, checks it for updates, and downloads any new files in the series. This process can be automated to download new files automatically; thus, it may seem to subscribers as though podcasters broadcast or "push" new episodes to them. Files are stored locally on the user's device, ready for offline use. Many different mobile applications allow people to subscribe and to listen to podcasts. Many of these applications allow users to download podcasts or to stream them on demand as an alternative to downloading. Many podcast players (applications as well as dedicated devices) allow listeners to skip around the podcast and to control the playback speed.

It would be useful to explore the international network of knowledge institutions and development organizations for the existence of readymade podcasts which relate to the operations of water utilities. CAWASA has already used this instrument to share knowledge around some of its training events, for example by interviewing trainers and trainees regarding the subject of the training. Podcasts could also be used by trainers to share knowledge or dictate a set of training sessions, to which people could subscribe.

5.3. Webinars
A webinar is a live, web-based video conference that uses the internet to connect the individual (or multiple individuals) hosting the webinar to an audience of viewers and listeners situated in different locations. Hosts can show themselves speaking, switch to their computer screens for slideshows or demonstrations, and even invite guests from other locations to co-host the webinar with them.

3 Source: the general parts of this text have been taken from Wikipedia.

4 Source: the general parts of this text have been taken from Wikipedia.
Webinar platforms also offer interactive features that the audience can use to ask questions and chat with the host. Many people who host webinars include Q&A sessions at the end to answer viewers' questions about the content from the presentation.

Professionals use webinars to give educational presentations related to their businesses or organizations and to connect with their audiences in a much closer way. The main benefit is that they are live and occurring in real-time, which makes it easy for audience members to interact with the host(s).

Many webinar hosts treat their webinar presentations as lectures or seminars to help teach their audience something. Some also use webinars to sell their own products and services. In addition to teaching and selling, webinars are also helpful tools for conducting live interviews with other professionals. The live aspect of it is really compelling for people who want the opportunity to connect and interact in real-time.

Put simply, if people want to learn something about a particular topic of interest, webinars are one of the best ways to expand knowledge by learning directly from the experts or trainers. And for the trainers, hosting webinars can be a great way to help them connect with your audience.

5.4 Exchanging Staff among utilities

One way of exchanging knowledge and experience is to exchange staff between utilities for certain periods of time. The advantage of this method is that it can be organized on a relatively low-cost basis and that it provides staff with an opportunity to learn how other utilities organize and implement their work.

Exchanging staff may be most effective for middle and lower level managerial staff and supervisors. It does not only provide the opportunity to expand their knowledge and skills, but they will be able to see how other utilities are organized, see the tools and methods which are used, see how customers are treated, etc.

CAWASA, being the regional organization of water utilities, could play a coordinating and stimulating role, e.g. by setting the “rules”, coordinating demand and supply for exchanging staff, and by helping participants to prepare for and follow up on their exchanges.

5.5 Benchmarking

Benchmarking is one of the functions of CAWASA. The Inter-American Development Bank (IDB) has proposed benchmarking to CAWASA in 2018, called AquaRating. CAWASA expressed interest along with 4 of its members in a Pilot project. Unfortunately, the Project stalled because of reasons beyond CAWASA’s control.

CAWASA would be in an excellent position to organize and implement a more structured and systematic approach to benchmarking, and this has in other regions proved to be a very useful and effective tool for sharing knowledge, learning and improving performance and service delivery.
One successful example of effective benchmarking was implemented by the Pacific Water and Wastewater Association (PWWA) in the Pacific Region. This region has many similarities with the Caribbean, consisting of some 22 (mostly) small island countries with water utilities that operate rather isolated from one another.

In 2010 the PWWA, with assistance from its development partners, initiated a benchmarking exercise which was carried out over multiple years. During the first years PWWA was assisted by a small team of consultants in developing the benchmarking system, collecting and analysing the data and preparing a comprehensive annual benchmarking report. The report was presented during the annual PWWA Conferences to the directors and the utilities. Prizes were awarded to the best performing utilities.

Soon a kind of informal competition evolved between the various utilities to “outperform” their direct “competitors” and each year the results of the benchmarking were discussed during workshops at the PWWA Annual Conferences. After several years, the benchmarking system was integrated into the World Bank administered IBNET system and is now operated on a routine basis. An evaluation carried out in 2016 showed that PWWA benchmarking had contributed to sharing of knowledge and improved performance of water utilities in the Pacific Region and that its benefits had easily outweighed its costs.

6 Organization and Finance

CAWASA activities are funded from several sources, including:

1. Annual subscriptions paid by full and associate members and
2. Revenue generated from implementation of programmes such as operator certification, staff training, regional conferences and management support services.
3. Contributions from regional and international organizations or agencies to coordinate the implementation of special projects funded from external sources.

CAWASA, as many regional water associations, is operating on a limited budget with limited resources and therefore its operations and services have to be run on a cost-efficient basis.

6.1 Organization

If CAWASA wants to establish and function as a Centre of Excellence for its member utilities in line with the adopted strategy, it will have to invest in creating the on-line infrastructure to host training events, Groups of Practice, webinars, etc. and generate sufficient revenues to sustain the operations of such a Centre. The development of its own on-line infrastructure within CAWASA is currently in progress.

At the same time, the Centre of Excellence will operate as a networking organization. In the first place it will have to be in touch with its member utilities, and it is recommended that each utility appoints a CAWASA Liaison Officer with a special focus on training and knowledge sharing.

In addition, CAWASA would have to liaise with other knowledge institutions, such as the Strategic Alliance for WLR, the Association for Boards of Certification (ABC), and organizations such as the
American Waterworks’ Association (AWWA) and the Water Environment Federation. AWWA sells online books and course material for ABC exams. In addition, numerous universities and research centers also provide a wealth of documentation and resources for training and education in the water sector.

6.2 Infrastructure

In terms of infrastructure, investments do not have to be large, but CAWASA would have to invest in Video Conferencing facilities and obtain access to enough bandwidth to conduct online conferences, webinars, etc. At the same time, CAWASA’s member utilities would have to also invest in such facilities. Many of the utilities, such as WASCO in Saint Lucia, already have installed such facilities. All organizations will be expected to cover themselves for the costs of such facilities.

6.3 Staffing

To operate the Centre of Excellence and manage and facilitate a substantial program focused on training of and supporting trainers and sharing of knowledge, CAWASA will need to employ staff. To get the program started and generate support among member utilities, CAWASA would need to appoint a full-time knowledge manager who is familiar with the subject of training and knowledge management and with on-line approaches and programs. In addition, one logistical/administrative/IT assistant (0.5 FTE) will be required. These persons could also be involved in running CAWASA’s ongoing certification and training programs.

The Knowledge Manager would have the following main tasks:

a. Establish contacts with member utilities to identify training and educational needs and establish and promote horizontal contacts and sharing of knowledge among utilities;

b. Coordinate with the STA in the initiation phase;

c. Establish contacts with knowledge institutions in the water sector and identify services and materials useful for training and educational purposes of water utilities;

d. Develop and organize ToT programs and follow up on such programs;

e. Establish and support groups of practice within and among member utilities on relevant topics.

The Administrative Assistant would have the following main tasks:

a. Support the Knowledge Manager in establishing and maintaining contacts among member utilities;

b. Provide logistical and administrative support in organizing ToT programs, such as organizing training programs, arranging for trainers, inviting trainees, etc;

c. Provide IT and logistical support in the use of web-based and on-line training services and facilities offered by CAWASA.

The costs of employing the Knowledge Manager and the Assistant will need to be recovered from contributions from member utilities.
7 Next Steps

Section 4.4 of this report contained a proposed Roadmap for establishing and developing a Centre of Excellence for CAWASA’s utilities and eventually the CARICOM region. This report contains a whole range of suggestions and potential tools which could be applied in developing such a CoE.

As a first step, it may be useful to establish a “Community of Practice” from among the HRM managers of CAWASA’s member utilities and start sharing information about the training and educational needs and programs of each utility. This would also be a very good forum, to gauge the interest of member utilities to jointly and under the leadership and coordination of CAWASA, develop the capacity to develop and implement suitable training programs for utility staff. Members of this COP should be encouraged to deep their CEO’s informed about the discussions in the group.

If the interest exists, a second step consists of exploring the willingness and ability of the utilities to contribute to developing this joint training capacity. This would involve that utilities would be willing to channel a small part of their training budget to fund the common costs of developing and running the training programs. Obviously, this decision would involve the involvement of the management of the utilities.

Based on the findings of these first two steps, it is suggested that CAWASA prepares a draft program for establishing a CoE, which may consist of a set of activities as described in this report. In a sense all the suggestions and options made in chapters 4 and 5 can be considered as modules, which can become part of a program, the size of which is adapted to the availability of resources. Simultaneously, CAWASA may try to identify donor organizations to support such programs.

After such a draft program has been prepared, CAWASA will have to obtain the formal commitment of the member utilities to start implementation.