Key Performance Indicators and Benchmarking for Water Utilities in the MENA/Arab Region

ACWUA 1st Regional Training Course, Alexandria, Egypt, July 4 to 8, 2010
Key Performance Indicators and Benchmarking for Water Utilities in the Mena/Arab Region

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organised by
Arab Countries Water Utilities Association (ACWUA)
InWEnt – Capacity Building International, Germany

supported by
Alexandria Water Company, Egypt
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Arab Countries Water Utilities Associations
InWEnt MENA Water Programme
InWEnt Capacity Building International, Germany
Executive Summary

The First Regional Training Course on “Key Performance Indicators and Benchmarking for Water Utilities in the MENA/Arab Region” was held in Alexandria, Egypt from July 4 to 8, 2010. It was organised by the Arab Countries Water Utilities Association (ACWUA) and InWEnt Capacity Building International, Cairo and Germany and supported by Alexandria Water Company. There were 31 participants from 6 countries, i.e. from Egypt, Jordan, Syria, Yemen, Palestine and Morocco, see annex 2. There were 4 trainers who had previously been part of the TOT workshop on performance indicators and scorecards in Zschortau Germany: Dr. Abeer Barkawy from Egypt, Mostafa Biad from Morocco, George Rizkallah from Jordan and Hans Hartung from Germany. Ms. Suzanne Saleh of InWEnt Cairo was responsible for the day-to-day organisation together with Ms. Yosr Salah of Alexandria Water Company and her team.
The training course was opened and accompanied for the first days by Eng. Magued Youssef, Director InWEnt Regional Office Cairo, Dr. Thomas Petermann, senior project manager of InWEnt Germany, Eng. Khaldon Khashman, General Secretary of ACWUA and Eng. Nadia Abdou, Chairperson of Alexandria Water Company and of ACWUA. The training course was the first one of ACWUA and started a series of courses on important topics of water utilities in the MENA/Arab region.

Objective of the course:
Participants will get an overview and introduction to common practices regarding key performance indicators and their application in water utilities to provide strategic guidance to management to improve performance of the urban water sector at process and corporate levels. The exposure to international and regional applications will lead to an in-depth exchange of experience and lively discussion (i) to contribute to the development of useful indicators at national or organisational level, and (ii) to promote common indicators for use within the MENA/Arab Region in the context of the mandate of ACWUA.

This 1st regional training course will enhance the participants’ skills and knowledge and will provide opportunities for regional networking: LEARN – regional learning and exchange network. Participants from the water sector will have the opportunity to share their experience, to learn from each other and to share perspectives with international experts.

The objectives have been reached. There was extensive information and first hand experience shared on key performance indicators and benchmarking for the water and wastewater sector. Participants had the opportunity to look at systems as they are applied in the countries where the participants came from as well as in Germany and internationally. They could compare them to what is being used in their home countries.

This was possible through a well-designed course with balanced inputs from experts and participants, plenary discussions, working groups and a visit to the Alexandria Water Company. The methodology is part of a Participative Adult Learning Approach (PALA) to involve participants and their experience and expertise to the maximum. All days were assigned a topic:

Day 1: Introduction and Regional Experience
Day 2: Key Performance Indicators
Day 3: Management by Results (and a visit to Alexandria Water Company)
Day 4 Benchmarking
Day 5: The way forward: the regional and national/organisational perspective

For the actual detailed programme refer to annex 1.

During the course, participants decided on 9 performance indicators for the start of a benchmarking process in the MENA/Arab region.

Daily quick evaluations are given as annex 6.
The recommendations of the participants to ACWUA are as follows:

1. Our role as water utilities in the Arab region will be to collect accurate Key Performance Indicators (KPIs) and send them to ACWUA.

2. ACWUA should establish a specialised web site for all the utilities for easy communication with ACWUA and to collect data concerning KPIs.

3. ACWUA should engage experts to examine the suggested KPIs and come up with a proposal for common KPI’s for the Arab region (based on our recommendations).

4. ACWUA should then convene a meeting with KPI experts from all the utilities in the Arab region to determine the common key performance indicators to start establishing a benchmarking system with the aim of improving performance and achieving our goals as water utilities in the Arab region.

The suggested key performance indicators to start a benchmarking process, as elaborated by the four working groups on Day 4 (each group being responsible for one task in the utility) are given here:

<table>
<thead>
<tr>
<th>Staff</th>
<th>Definition</th>
<th>Calculation Formula</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number of employees for every 1000 service subscriber</td>
<td>(No. of employees/ water service subscriber (house connections)) ×1000</td>
</tr>
<tr>
<td></td>
<td>Days of training per year</td>
<td>Total training days/ number of employees</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Service quality</th>
<th>Definition</th>
<th>Calculation Formula</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>water quality</td>
<td>No of complying samples/ total of taken samples (x100)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Number of complaints for each 1000 connections (we can separate between technical or commercial aspects)</td>
<td>Total of complaints/ total of connections (x 1000)</td>
<td>Problem (Ahmed from Syria): availability of the number of connections</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Finance</th>
<th>Definition</th>
<th>Calculation Formula</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operational Cost Recovery (%)</td>
<td>Total Water Sales/ Operational Cost (excl. tax, depreciation and interest)</td>
<td>Discussion about depreciation to be included or not</td>
<td></td>
</tr>
<tr>
<td>Unit Operational Cost ($/m3)</td>
<td>Total Operational Cost (excl. tax, depreciation and interest)/ total water production</td>
<td></td>
<td></td>
</tr>
<tr>
<td>CONCEPT</td>
<td>UNIT</td>
<td>INDICATOR</td>
<td>Notes</td>
</tr>
<tr>
<td>---------</td>
<td>------</td>
<td>-----------</td>
<td>-------</td>
</tr>
<tr>
<td>Total number of pipe breaks per year expressed per km of the water distribution network; and per number of water connections</td>
<td>breaks/km/yr. (or breaks/conn/yr.)</td>
<td>Pipe Breaks</td>
<td>No general consensus</td>
</tr>
<tr>
<td>Total number of water complaints per year expressed as a percentage of the total number of water connections.</td>
<td>% of water connections</td>
<td>Complaints about water services</td>
<td>Is it a service quality PI?</td>
</tr>
<tr>
<td>Difference between water supplied and water sold expressed as a percentage of net water supplied; as volume of water “lost” per km of water distribution network per day; and volume of water “lost” per water connection per day.</td>
<td>% - m³/km/d - m³/conn/d</td>
<td>Unaccounted-for-Water</td>
<td>No general consensus</td>
</tr>
</tbody>
</table>
2.0 The training course day by day

Day 1: Sunday July 4, 2010

The official opening was setting the training course in perspective from different angles. The participants were welcomed by the following four persons:

Magued Youssef, Director InWEnt Regional Office Cairo was the first to welcome the participants. As this training course was the first opportunity for many of them to get in contact with them, he explained InWEnt as a worldwide organisation of capacity building and the activities in Egypt.

Dr. Thomas Petermann, senior project manager of InWEnt completed the picture of InWEnt activities by detailing the InWEnt programmes on water for the MENA region. InWEnt cooperates with ACWUA, the Arab Countries Water Utilities Association and offers the courses and other activities jointly with ACWUA. He underlined the importance and the practical use of performance indicators for the water utilities and stressed the regional networking aspect and its many benefits (see Annex 4.1 as well).

Eng. Khaldon Kashman, General Secretary of ACWUA, welcomed the participants on behalf of ACWUA and took the opportunity to explain the organisation and its new strategic plan of 2009 to 2014. At the end of this phase, 10 training courses will be implemented per year together with specialised conferences of important topics. He particularly stressed the good cooperation with InWEnt in capacity building.
Eng. Nadia Abdou, Chairperson of Alexandria Water Company and of ACWUA, opened the training course officially, mentioning the cooperation between ACWUA and Alexandria Water Company and the cooperation between InWEnt and Alexandria Water company as well. A number of engineers and accountants of the company have been trained in Germany and could give as input what they had learnt there.

The participants introduced themselves first to their neighbours and then to the plenary with the following points: name, position, background, „one achievement you are proud of“, experience in KPIs, interest in the course and hobby. This was a good starting point for the course, as participants learned about each other and had topics to start exchanging experiences during the breaks. This was helped as well with a personal profile, which was filled out by the participants and later posted on pinboards so that it was visible for everyone.

**Rules and regulations** for the training course were discussed. Particular emphasis was laid on the PALA approach (PALA = Participatory Adult Learning Approach), which puts the participants in the centre. „Every resource person is a participant and every participant is a resource person“ is one of the key principles of this approach. Rapporteurs were selected for the different days. They would report their observations first thing in the morning and give a review of the previous day.

**A general overview** of the use of performance indicators in the utilities of ACWUA was given by Eng. Khaledon Khashman before the break. He talked about the experiences in Jordan connected to Public Private Partnerships and how benchmarking will help member utilities of ACWUA. There is a new working group on Benchmarking established at ACWUA and they will develop the recommendations of this course further.

The afternoon started with an assessment test. An assessment sheet on performance indicators and benchmarking was filled out by the participants after the break to give an overview of the current level of the participants' knowledge and experience in relation to our topic.

There were **2 case studies** presented on the use related to performance indicators. The first one was a short presentation of Alexandria Water Company by Eng. Nadja Abdou. in the second part of the Alexandria Water Company presentation, Eng. Hassan Saudi showed the use of indicators especially in the operation of sand filtration and the success in improving the operational efficiency in a convincing way (see annex 4.2). The second case study was given by Eng. AbdelAli Rabhi of ONEP (National Office of potable water, Morocco), who explained the performance indicator system used within ONEP (see annex 4.3). There was a lively discussion following both presentations, first on clarifications of some of the details of the presentations but afterwards also on the more general aspects of performance indicators and their function.

Beside the 2 case studies, there was as well a contribution by the Holding Company of Water and Wastewater (HCCW) on their use of Performance Indicators by Eng. Khaled Gomaa. HCCW is an Egyptian stock company and has 23 independent subsidiary companies with board of directors headed by a chairman and delegated members. HCCW is supervising the
companies regarding the compliance with general policy, assessing their performance and managing the capital assets.

A general discussion on performance indicators followed, dealing as well with the role of the regulator and conflict of interest if the regulator is part of the board of governors of a water company.

The training session was concluded with a short feedback from the participants. Mentioned were the rich diversity of experience gathered together, the feedback available from the participants and a new way of thinking bottom-up which was introduced.

The day ended with a welcome dinner at the Windsor Hotel. Participants had the opportunity to get to know each other better across the country borders.

Day 2: Monday July 5, 2010

The day started with yesterday’s review by Ms. Hanan Khouri and Mr. Tareq Dubaee.

Eng. Adel Murshed of Yemen was briefly giving the experience of the Performance Indicator Information System (PIIS), which was established to monitor the performance of the “Urban Water Supply and Sanitation Sector” (UWSS) at both local and national levels. The PIIS is a computer software system based on 90 basic data items. These are either automatically extracted from the accounting and billing software or they are entered manually. The basic data can be converted into 70 performance indicators using simple calculations based on the performance indicator’ system of the International Water Association (IWA).

Eng. Mostafa Biad, the trainer gave an in-depth presentation (annex 4.4) on “Key Performance Indicators: definition, which, why, how; strengths and weaknesses”. The presentation was divided in 3 parts:

Part 1: Introduction to Performance Indicators comprising the following topics:
- Challenges of the water supply and sanitation utilities in a modern context
- Need for information to effectively and efficiently managing utilities.
- Discussion about the difference between efficiency and effectiveness was following; efficiency is always related to resources while effectiveness is related to goals/objectives.
- Definition of PIs. Many terms are used and have to be clearly understood when handling figures: data, variables, CI (context information), and PIs:
  - Data: information collected from the field or easily obtained
  - Variables: Data elements in processing rules in order to define PIs
  - CI: Data elements that provide information on the inherent characteristics of utility and account for difference between systems
  - PI: is a combination of different variables to measure the efficiency and effectiveness of utility (compared to targets or within a time frame)
- Why using PIs, differentiated
  - for water supply utilities and
  - for national regional policy-making bodies and regulatory agencies
Part 2: Performance Indicators in the Water Sector:

- Describing the water process: the issue at this stage is to have a common understanding of the different activities of a utility (water supply system) and explaining the PIs used: technical indicators (operation, function, etc.), financial performance and productivity indicators.
- Simplified model vs. integrated process model structure and how to choose the right PIs according to the model chosen (basic module, consolidation module or advanced module).
- Performance indicator grouping (IWA version): Eng. Mostafa BIAD gave detailed explanations of the PI system adopted by IWA and definitions and examples of PIs in each of the 5 groups:
  - Physical: facilities (Total Production, PS, etc…) utilisation, storage capacity, automation (remote control degree), …
  - Operational: electricity consumption, facility failures, water quality monitoring, …
  - Personnel: productivity, training, category of personnel.
  - Quality of service: service coverage, continuity of the service, water quality…
- Groups of PIs and examples (IWA): examples of Performances Indicators and sub-indicators have been discussed from IWA questionnaire excel sheet (and the IBNET questionnaire as well).
- The last point was about analysing performance indicators and how to assess their confidence (reliability and accuracy) of the data and the indicators.

Part 3: Setting up a KPI System, Implementation

Eng. Mostafa BIAD gave one definition of a PI system, which basically is “the set of PIs with the related data (including accuracy and reliability), including context information and explanatory factors and considering interests of utility management, and also those of stakeholders, users and the environment”.

In the discussion the participants’ attention was drawn to many issues such as:

- poor link between PIs and strategy,
- the wrong things are measured,
- generally speaking utilities measure what is easy to measure,
- in this way the only relevant measures are financial ones.

The most important thing is to use the measured data and the PI system to analyse the problems and find solutions to design and implement the right actions for forecasting and planning and to improve management.

The presentation gave details about how the Performance Indicator System can be used in the different phases of the strategic approach (PI system implementation process). Each part was ended by a discussion including direct questions and comments, the main ideas being discussed as follows:

- A consensus should be reached about the importance of PIs in water utilities of the different countries represented in this training.
- Cost recovery and financial sustainability is the main challenge in this respect, sound PIs should be designed and followed up closely.
• Each utility can choose its own PIs: the ones that respond to its needs and reflect its reality.
• A PI system is not a goal in itself but a means to achieve better management and improve performance in sustainable manner.
• Confidence grading is a complex process (checking reliability and accuracy of the data). Utilities have a long way to go to apply such a system including choosing the right (and simple) procedures and investing in new technologies for measurement, data collection, processing, etc...

Working groups:
The objective was to define an indicator system at regional level, (e.g. for ACWUA members). The participants were divided among 4 groups (1. O&M, 2. Financial, 3. Quality of service, 4. Staff) and have been asked to determine the most important performance indicators (3 to 4 PIs) in utility management and for different areas:
• Name and define 3 to 4 PIs (Clear definition)
• Set calculation formula
• Data needed and source of Data (Information flow)
• Explain the use and level of importance (why and to whom)
The working groups and afterwards the plenary was an occasion to strengthen the discussion about the importance of PIs, the definitions and the soundness of the indicators. As a result of the working groups, each group presented 4 performance indicators with clear definitions and calculation formulas. They also explained the importance of each PI for utility management and for other stakeholders (customers, regulators, policy makers, environment, etc.). The detailed information of the chosen indicators is given in the annex 5.
A lively discussion took place about two same indicators that were given by two different groups (O&M, service quality):
• Complaints about water services: total number of water complaints/yr expressed as a % of the total number of water connections.
• Water quality: number of samples that pass water quality regulations to the number samples required.
Day 3: Tuesday July 6, 2010

The day started with feedback and reflection on Day 2 by answering the questions:
* What did you gain from the discussion that took place the day earlier? and
* Important issues that were raised but not addressed?

The reflection session was administered and run by Ahmad Alkasir of Syria and Ahmad Rajoub of Jordan. The reflection was centred on the definition of the KPIs, how to establish one, the need for an agreed upon acceptable regional KPIs and the results from the 4 working groups formed: WG 1: Operation and Maintenance, WG 2: Financial, WG 3: Quality of Services, and WG 4: Staff.

Mr. George Rizkallah, the trainer moved with the participants to the first part of the presentation (annex 4.5) on “Management By Results (MBR)”, what is it? Different tools used in applying it, including Performance Indicators (PI) and Balance Scorecards (BSC) and lessons learned in applying MBR. Basic principles and concepts were addressed in detail reflecting the need for a comprehensive management and reporting system aimed to improve effectiveness and accountability in achieving results - as well as focusing on goal- setting. Key features of MBR were explained where there is a need to analyse problems and determine their causes; identify measurable changes (results) to be achieved based on problem analysis; design strategies and activities that will lead to these changes (results); balance expected results with the resources available; monitor progress regularly and adjust activities to ensure results are achieved; evaluate, document and incorporate lessons learned into next planning phase; report on the results achieved and their contribution to achieving goals and finally reward achievements. The concept and definition of a result chain was introduced including the different levels of results being short-term results or outputs; medium-term results or outcomes and longer-term results or impact. An example explaining the relationship and interaction among the different levels was explained. The basic definitions and contents of the different MBR tools including the PI and BSC were introduced briefly and lessons learned and experiences were presented. A final remark on MBR is “Draw on your limited Resources and make them what you need to get you where you want to be!”
The participants were divided into 4 different groups given the same question of „What do you think, the challenges and problems of implementing Management By Result (MBR) would be? - on an institutional level, a management level and on an individual level.

Mr. Abdel Ali Rabhi presented the Moroccan model of implementing MBR where similar principles are being used especially goal-setting, Performance indicators are being used to measure the staff performance and the reward system for achieving the goals set.

The 4 working groups presented their findings into the plenary session were nearly all 4 groups had similar answers focusing on limited funding resources, governing rules and regulations to be reviewed and changed, unskilled cadre and finally the kind of training provided being not sufficient.

The trainer then moved to the second part of the presentation which focused on the „Compensation and Reward Systems“. A good compensation system would be objective and fair, pays competitively with the local market, attracts and retains good employees and reflects the value that the job brings to the organisation. The difference between monetary and non-monetary rewards was introduced and further discussion on those concepts were the basis for the next assignment for the 4 groups which is to try to design a Reward System (based on what was discussed). The findings were presented the next day.
Briefing on the field trip to Alexandria Water Company was presented by Trainer Dr. Abeer Barqawie, were she informed the participants that we will be divided into 2 groups touring AWC and asking questions related to the materials discussed during the first 2 days of training.

When reaching Al Nozha Station for Water Treatment (of Alexandria Water Company), one group went with Dr. Nehal El Rakshy (AWCO Laboratory Consultant) and Eng. Faten Elkholy (Technical General Manager) to receive information about Al Nozha station in general, the central laboratory and the use of international standards & up-to-date systems to achieve the goal of supplying the customers with drinking water according to standards.

The second group went with Eng. Mohamed Elshafeay (manager of Al Nozha Station) to see the treatment process, starting with the raw water, the pre-chlorination, the alum dosage and going to the clarification basins and the rapid sand filters and the post chlorination before the drinking water is leaving the station.

The groups changed to have the same information.

The following questions had been prepared in the groups and answers sought during the visit:

1- What are the key performance indicators for the water quality samples? And how are these indicators determined and calculated?

• Answer: Not matching samples not to exceed 1%
2- What are the KPIs for the water treatment chemicals which added to the raw water? And how are these indicators determined and calculated?

• Answer: the volume of chemicals used is related to the amount of raw water entering the plant.

3- What KPIs are used for water losses? And how are these indicators determined and calculated?

• Answer: The water losses were restricted to the treatment process: quantity of treated water minus quantity of wash water divided by the quantity of treated water.

4- What happens with the KPIs? How can we use the results to improve performance and achieve goals?

• Answer: With a system called „MARS“, deviations can be calculated, the causes analysed so that action plans can be reduce the deviations to improve the performance and achieve the set goals.

The day ended with whole group visiting Al-Muntazah Park and having dinner there.
Day 4: Wednesday July 7, 2010

The day started with feedback and reflection on Day 3 through answering the same questions: What did you gain from the discussion that took place the day earlier? and Important issues that were raised but not addressed? The reflection session was administered and run by Salah Eddine Bensaid of Morocco and Hanan Omar Mohamed of Egypt. The reflection was centred on the new information presented on MBRs, the need for adopting new creative ideas and improving the compensation and reward system being used presently in the utilities. The 4 working groups presented their assignment on designing a reward system (based on what was discussed on day 3 part 2 of the Management By Results), which included designing new rewards like what Egypt did in introducing a Union Association for Hajj and Comprehensive life insurance for all staff. Jordan put another suggestion forward for establishing reward systems for meter readers and collectors, while Morocco suggested reward systems for lab technicians and maintenance crews.

The groups from the field trip presented their feedback regarding what they saw at Alexandria Water Company. It included comments such as “not all the questions were addressed”, “not sufficient clear indicators for samples testing”, the amount of added alum (Shabeh) seems high and water salinity. The question of what happens if the PIs are not reached was discussed. Is there any authority that follows up and controls? The answer was provided by Egypt: there is the “MARS” system with the responsibility of controlling and following up on the PI values.

**Hans Hartung**, the trainer moved with the participants to the second part of the day to include a presentation (annex 4.6) on „Key Performance Indicators and Benchmarking in the International Context“. The presentation was introduced by the following questions:

- What is benchmarking?
- Do you know the definition?
- Do you know any field, where benchmarking is practised?
- Any experience with benchmarking?

Experiences of benchmarking within the different countries represented were discussed, where differences in the philosophy became clear. While some participants insisted that benchmarking dealt strictly with comparisons, others were more convinced that it was rather the process of measuring against a reference point. During the presentation, many points became clearer.

There were five parts of the presentation, always followed by lively discussions:

**German Practice and Understanding**

This part dealt specifically with the reasons and the need for benchmarking, benchmarking as a continuous process, corporate vs. process benchmarking and the different steps of benchmarking. The example of a benchmarking company (called Aquabench), founded by different water and wastewater utilities and their work gave an understanding of how important this process is now in Germany.
Online-platform
The explanations of the online-platform showed the possibilities of internet technology in benchmarking. There is not only online data entry but also
• An archive for entered data
• Display of time series is easily possible,
• An authorisation concept for users is integral element.
• Individual online analysis in can be done in consideration of:
• Easy generation of new performance indicators
• Own online analysis with an anonymous data pool
• Own adjustment of cluster criteria for a more suitable comparison.
• Graphical generation of the online analysis and
A simple possibility of experience sharing within the online system is another important ele-

Selection Criteria for PIs
The objective of performance indicators has always to be kept in mind: They must be suitable for the description of the efficiency and effectiveness of the sector! Criteria would be:
• Manageable limits must exist
• IWA-Compatibility is very helpful
• Consideration of existing surveys in order to use data
• Grouping a potential for grouping the benchmarking „objects“ must be given
• Technical data and financial data can lead to useful indicators
• Demonstrating specific characteristics
For better interpretation, in particular with large comparative groups, a grouping (cluster) ac-

The European and International Scene
Different regional benchmarking efforts in the water sector are taking place, many of them with remarkable success:
• Africa: South African Association of Water Utilities (SAAWU) with water service providers of South Africa
• Southeast Asian Water Utilities Network (SEAWUN)
• Arab Countries Water Utilities Association (ACWUA) has the objective to start a benchmarking process in the region and this training course is one important effort to reach this objective.

• American Water Works Association (AWWA)

• World Bank, Water Research Centre, IBNET has developed a benchmarking process where every utility can participate. However the face-to-face exchange between participants within the benchmarking process is not actually part of it, an important prerequisite according to a German perspective.

The different approaches of these benchmarking efforts can be seen in how the indicators are categorised. IWA (the International Water Association), IB-Net, AWWA and SEAWUN are categorising the indicators in the more classical way following the different processes in the water utility, while Germany and the European Union is following more aggregated criteria of (finance & efficiency, reliability, quality, sustainability and (customer) service.

Lessons learnt from benchmarking efforts in Europe:
• Clear definitions of basic data and PI are of utmost importance
• Don’t collect too much information – keep it simple
• Follow the long-term development of a selection of relevant performance indicators
• Comparison of performance indicators is a first step towards process benchmarking
• Information about performance indicators must not be kept on the managerial level in the organisation
• An active involvement from the top management is necessary

Group Work
Again 4 groups were formed making sure that each group has a representative of each of the countries present. The topics were the same as of Day 2: Operation & Maintenance, Service Quality, Finance and Staff. The task was to select 2 out of the 4 PIs (or creating new ones) for each group where

• The PIs which are of interest to all utilities
• Its definition is widely accepted and
• The PI makes sense in a regional context.

The presentation following the group work centred around these points. The results are given in the executive summary and are seen as recommendation for ACWUA to start a benchmarking exercise within its utilities. Many of the PIs were not totally accepted by all participants as important in the regional context but nevertheless they form a basis to discuss further.
Day 5: Thursday July 8, 2010

Reflection of day 4 was presented by Mr. Khaled Gomaa (Egypt) and Mr. Mohamed Noaman (Yemen). They talked about the reward system in different countries of Jordan, Syria, Yemen, and Morocco and mentioned that some of them focused on financial rewards only. The definition of benchmarking, the benchmarking process and the idea of a benchmarking company (Aquabench) was mentioned as well as the grouping (clustering) of companies according to pre-selected criteria.

Mr. Ahmed El Rajoub presented the Jordan case & benchmarking within the Northern Governorate Water Administration (NGWA) and answered questions (see annex 4.7).

The assessment test of the first day was distributed again to and the results compared favourably with the ones of the first day. The test itself, the results & the answer sheet are being attached as annex 3.

Mr. Mostafa Biad presenting ACWUA ideas & objectives about KPIs & benchmarking was moderating an open discussion with the participants. In the following working group session participants were separated into 6 groups, each group representing a country to answer the following questions:

- What are you going to do to help ACWUA to establish a benchmarking system within Arab utilities?
- How (in your opinion) will Arab utilities use an ACWUA benchmarking system to improve management and achieving performance?
The six countries presented the following answers:

**Syria:**
- Benchmarking will help us in
  - Knowledge exchange
  - Piloting initiatives
  - Spotting performance short comings through comparisons

**Egypt:**
- Provide ACWUA with accurate KPI's used in the Holding Company and its subsidiaries companies to help in setting up a benchmarking system.
- The Holding Company uses the MARS system which helps in setting accurate KPIs
- By comparing and analysing the results from the different countries information, ACWUA should send recommendations to each country to start setting action plans to reach the standards which improve the performance & achieve the utility goals

**Palestine:**
- A suggestion for ACWUA is to organise a data base process, which will be responsible to set up benchmarking for Arab utilities like the German company Aquabench.
- By benchmarking we can determine & achieve our goals

**Jordan:**
- We can help ACWUA by presenting our experience and exchange our information
- Giving our information about KPIs will help in comparing the results
- Benchmarking will help us achieving our utility goals

**Yemen:**
- Benchmarking will help us in improving our performance and achieving goals
- Meetings with utilities and members from Yemen to identify, collect, and analyse data to set a Yemen common indicator which will help ACWUA to set up a benchmarking system.

**Morocco:**
- Through several meetings with the utilities we can determine specific KPIs for Morocco then send it to ACWUA to establish the Benchmarking system.
Recommendations to ACWUA
1- Our role as water utilities in the Arab region will be to collect accurate Key Performance Indicators (KPIs) and send them to ACWUA

2- ACWUA should establish a specialised web site for all the utilities for easy communication with ACWUA and to collect data concerning KPIs

3- ACWUA should engage experts to examine the suggested KPIs and come up with a proposal for common KPI’s for the Arab region (based on our recommendations)

4- ACWUA should then convene a meeting with KPI experts from all the utilities in the Arab region to determine the common key performance indicators to start establishing a benchmarking system with the aim of improving performance and achieving our goals as water utilities in the Arab region.

Afterwards the participants filled out the evaluation sheets (trainers & the training course).

The closing ceremony started with a speech by Eng. Nadia Abdou:

Eng. Nadia Abdou assures that it’s a great pleasure and an honour to see this great achievement and the real participation of all the participating countries to exchange experiences. She added that it’s not a long time since the construction of ACWUA. Otherwise, many achievements have been carried out. All this because of the fruitful efforts from all.

She deeply thanks InWEnt of Germany and the organisation ESCWA because it had an efficient role in the development of all the utilities in the Middle East. This organisation played an important role in Cairo by forming a “Steering Committee” 2006. Consequently, the decision of the establishment of ACWUA was issued. We exerted strong efforts and cooperated for more than two years to make ACWUA a well-known organisation working in all sectors related to water.

Regular Conferences and workshops assist the Association to achieve its goal in addition to issuing brochures.

She declares that she has been selected to be the chairperson of ACWUA in 2008. Eng. Khaldon Khashman has been selected to be the General Secretary of ACWUA.

After that, a second conference had been held in Turkey during the World Water forum in order to get many grants for ACWUA. Six agreements have been made, among them with InWEnt, the EU and ESCWA.

Finally she urged renewing the membership of all the participating countries to be able to participate in all conferences and workshops organised by ACWUA. She also hopes that all the participants will meet again soon in other workshops and conferences.
Mr. Ahmed El Kaseer (Syria) thanks Mrs. Suzan Salah from InWEnt for her efficient and effective participation, and he thanks all the Egyptians for their warm welcoming and their hard cooperation.

Mr. Adel Al Haddad from Yemen thanks InWEnt for this training course and the workshops. They also thank the hosts represented by AWCO. They assure that it was a very successful and useful training course; mainly because they exchanged experience & Knowledge.

Mr. Hans Hartung stresses the fact that training courses are not only indicators of quantity but indicators of quality should be considered as well. How can we apply what we have learnt? Are there going to be any changes in our utilities after returning back? The most important thing is the role of the participants who will transfer what they have learnt within their utilities. All the organisers hope to see the fruitful results of this training course next year and will review the application of what has been discussed in the course.

Each country received an USB stick with all the documents on the training course to be copied within the country. A list of participants was as well distributed.

Each participant received the training course certificate by Eng. Nadia Abdou.