Fact-finding mission water – 20 – 23 April 2015
Quenching the Gulf’s thirst:
Opportunities for Dutch water technology (summary)

Author: R. Agterbos
Date: August 2015
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1. Background
This report describes the headline output of a fact-finding visit in April 2015 to the UAE with the focus on business opportunities for the Dutch water (technology) sector in the UAE and broader GCC region. The report is divided into 2 parts:

Part A: introduction or region and approach
Part B: summary of visit results & conclusions

2. PART A: INTRODUCTION AND APPROACH
Based upon request of the Embassy in Abu Dhabi, Topsector water and NWP are preparing a fact-finding mission to the Gulf region. Below is a short description of background, aim and proposed approach.

2.1 The GCC region
The GCC region offers many opportunities for water projects: the region has very specific demands in the area of water (high volume of city development, difficult climate circumstances). This leads to many project opportunities, at the same time high level of global competition. Topsector Water has indicated GCC region as one of the regions with high potential. NWP has undertaken a high number of activities in the period until 2010, under the umbrella programme “2getthere”. The results of this programme were at that time relatively positive, however followed by the global crisis that also had important consequences in the GCC region (e.g. Dubai). In the past few years the attention from the water sector for the GCC region has been reactive.

2.2 Aim marktscan
Given the positive global economic developments and the developments in the GCC region, and in the light of above background, the Dutch Embassy in Abu Dhabi asked Topsector Water and NWP to undertake a fact-finding mission to the GCC region. Main aim was to interview various stakeholders (see below) to get a thorough insight in the possible business opportunities for the Dutch water sector in this region. This should be based on the demand this region has, followed by an analysis on what the Dutch water sector specifically can offer to meet (parts of this) demand. In this order, so not starting with what the Dutch sector offers first.
In general we (Topsector water, Embassy, NWP) have the impression that the GCC region should offer possibilities, but a focused feasibility has to be step 1, based on which possible further steps can be taken.

2.3 Approach
The approach was to visit the region with a compact and well prepared visit (fact-finding), undertaken by Topsector water and NWP. Paul Buijs (Topsector Water) and Roy Agterbos (NWP) are both experienced in this region and have executed the visit. In order to be able to meet and speak to as many stakeholders as possible, we choose to do this visit around WETEX 2015 (April 2015). The main advantage was that this would enable us to meet the relevant authorities from the UAE, but at the same time also available market
sector parties and others, that all had a focus on water in this week. The intention was to do a quick scan visit, with relatively low investment, leading to first insights and a first step in possible future approach towards this region from the Dutch water sector.

The visits took place on 20 – 23 April (4 days), including the WETEX event days in Dubai. Following scheme was the basis:
- Monday 20 April 2015: visits in Abu Dhabi
- Tuesday 21 – Thursday 23 April 2015: visits at WETEX 2015

2.4 Planning and preparation

The purpose and end result of the visit was to have a first insight and update of the current situation in the UAE water sector (and GCC broad). After finalizing the report of this visit, the next step then should be to further analyze this information, add information that is missing, check the status within the Dutch water sector, and combine all that information into a full business opportunities report for the Dutch water sector. Planning should be to have this report available by the end of 2015.

The end report should include:
1. - General developments in the regional water sector
2. - Project developments in the coming 1-3 years
3. - Technical aspects of these projects and assistance needed
4. - Commercial aspects (tenders? Other possibilities?)
5. - Matching aspects with Dutch sector
6. - General introduction of Dutch sector and its usp’s
7. - General commercial info on GCC region (necessary legal info, regulations, etc)

2.5 Meeting overview of the fact-finding mission

The programme for the fact-finding visit was led by the Embassy and consulate. They did encounter some difficulties in getting the appointments in place for the mentioned dates, where some desired meetings were not able to be planned in. Following meetings took place:

United Arab Emirates Ministry of Energy:
- Fatima Alfoora Alshami, Assistant Undersecretary for Electricity
- Mohamed Hasan Al Mutawwa, Senior Green Buildings Architect
- Katarzyna Waker, Project Manager

United Arab Emirates Ministry of Environment & Water:
- Mohammed Mousa Abdullah, Director of Agriculture Research

Companies: Shell, Deltares, Arcadis, SEWA, Corodex, Veolia, Metito, Van Dijk Ecosolutions, AA Services, A.Hak, BASF (Inge), Projecx and various others on WETEX.

The visit’s out of pocket costs were financed via the Embassy, the time involved was covered by NWP and Topsector Water.
3. PART B: SUMMARY OF VISIT RESULTS & CONCLUSIONS

3.1 Water challenges in the Gulf region
As is widely known, the Gulf region suffers from severe shortage of natural and renewable water resources. The limited available ground water resources are severely under pressure, both from a quantity and quality perspective. Sea water desalination is rapidly gaining field, with high costs and severe environmental impact. As the population in the area is predicted to grow rapidly as well, the matter is most urgent. The main challenges the region faces are:
1. Raising awareness to decrease the average water consumption from 614 l/capita/day to 350 l/capita/day. Water is heavily subsidized, therefore the perceived value is low;
2. Drastically reducing the unaccounted for water to less than 5%;
3. Maximize the reuse of effluent;
4. Generate ‘more crop per drop’, 56% of the water is used in agriculture, 12% in forest plantation and 7% in urban landscape;
5. Introduce more sustainable desalination systems, using sustainable, renewable energy.

Though strong centralized municipal utilities are generally responsible for water distribution, both consumer and industry have fairly easy access to alternative water supply (e.g. from water trucks). This implies that the utilities can hardly influence water consumption by restricting supply: the customer will simply go elsewhere. On the waste water side, this applies to developers in particular: they can choose to treat wastewater locally and re-use, or to remove it by truckii.

Despite the regions obvious prosperity, on a government level there is a strong awareness that investment in desalination only is not the right answer and that energy is not limitless.

3.2 Opportunities for Dutch water technology
As the focus has been on sea water desalination, the Dutch water technology involvement in the region has been limited. However, since the region is growingly aware that this is not the ultimate solution, Dutch technology and expertise can offer solutions to the main challenges:
1. The introduction of water efficient appliances and water saving policies has been successful in the Netherlands thanks to the implementation of an approval scheme for these appliances (Kiwa) and raising the consumers awareness to install and use them (VEWIN);
2. Water distribution management has been perfected in the Netherlands to the point that there is virtually no leakage and very little unaccounted for water. Dutch consulting engineers, often in co-operation with Dutch utilities apply this experience around the globe;
3. Re-use of effluent is not limited to water re-use: Dutch technology uses waste water as a valuable resource for energy, nutrients, minerals and fresh water (a.o. Nijhuis Water Technology, Paques);
4. The Netherlands is one of the world's largest exporters of agricultural and foodproducts, thanks to its innovative agrofood technology. Efficient use of water, energy and nutrients is key to that position (a.o. WUR);
5. Dutch institutes (TU Delft, Wetsus, UNESCO-IHE) have done groundbreaking work in the field of (bio)fouling of membranes. Key researchers from these institutes are now working for KAUST.
3.3 The water market in the Gulf

Though there seem to be plenty opportunities for Dutch technology and expertise to be applied, few Dutch companies are successful in the Gulf region. This is mainly due to:

1. Tenders are primarily CAPEX (investment cost) driven, long term cost of ownership, quality and sustainability are not often the primary drivers, so there is less opportunity to show the benefits and added value of Dutch technology. Though there finally is a tendency to require ‘manufactured in Western Europe’ in the tenders, often still the price dominates;
2. The large municipal projects are mainly won by international EPC contractors and system integrators (e.g. 2 out of 3 Qatar waste water treatment plants were won by Belgian EPC’s);
3. The lack of regulation on product quality, which opens the market for extremely cheap solutions for residential and industrial systems that generally are sold direct, rather than through tender processes. Multinational companies in general uphold their international quality standards.

3.4 Short term actions to improve the Dutch position

Based on interviews with government agencies, engineering consultants, equipment manufacturers and local agents of Dutch water technology companies, we see the following actions as key to success in the Gulf region:

1. Get involved in the development of the Water Strategy Plan that is currently being developed by the UAE Ministry of Energy. The initial focus is on technology innovation, however we sparked a keen interest in demand control and approval schemes;
2. Monitor the large scale municipal projects and get connected to the main international EPC’s that win these jobs. This is by far the fastest way to get Dutch equipment installed in the region;
8. Examples: Besix Sanotec, Waterleau (both Belgian EPC’s), Veolia, Metito, Corodex
3. Identify the (multinational) companies and developers that do maintain high quality standards and focus on these parties to introduce Dutch solutions.
9. Examples: Mars Foods, Coca Cola, Pepsi Cola

Next steps:
1. Discuss this report with Embassy staff and conclude on results and conclusions
2. Identify the needs and willingness for involvement from Dutch water sector parties in a collective approach for the GCC region
3. Prepare a plan of action for the 2nd half of 2015 (which should include the production of the final report as described) as well 2016

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1 Average consumption in the Netherlands was 250 l/capita/day in the 1970’s, since early 1990’s this is 120 l/capita/day
2 Even the waste water of Burj Khalifa is trucked out