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MEMORANDO

PARA: Oscar Izquierdo Sandí
Cooperación y Asuntos Internacionales

FECHA: 31 de enero del 2018

DE: Saul Gerardo Trejos Bastos
UEN Programación y Control

No. UEN-PC-2018-00164

ASUNTO: Informe de viaje al exterior "Amsterdam International Water Week 2017"

De acuerdo a lo estipulado en el Capítulo IV y Artículo 12 del Reglamento de Actividades Oficiales en el Exterior del Instituto Costarricense de Acueductos y Alcantarillados, adjunto el informe de viaje, correspondiente a la participación en el "Amsterdam Internacional Water Week 2017", llevado a cabo del 28 de octubre al 04 de noviembre del 2017.

C: Rodhe Baez Espinoza, Cooperación y Asuntos Internacionales
Archivo





**INSTITUTO COSTARRICENSE DE ACUEDUCTOS Y
ALCANTARILLADOS**

**DEPENDENCIA:
UEN Programación y Control**

**INFORME DE VIAJE AL EXTERIOR
DEL 28 DE OCTUBRE AL 04 DE NOVIEMBRE DE 2017**

“AMSTERDAM INTERNATIONAL WATER WEEK 2017”

Fecha: NOVIEMBRE DE 2017

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Ficha informativa:

País y ciudad visitada:	Amsterdam, Holanda
Fecha de la visita:	Del 29 de octubre al 04 de noviembre de 2017
Funcionario(s) de misión AyA:	Saúl Trejos Bastos
Motivo del viaje:	Participar en el “Amsterdam Internacional Walter Week 2017”
Contacto en el lugar de misión:	Amber Douma (amber.douma@minbuza.nl)

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Ing. Saúl Trejos Bastos

1 Introducción

Este informe resume los principales aspectos relacionados con la participación del funcionario Saúl Trejos Bastos en el “Amsterdam International Water Week 2017”, organizado por el Gobierno Holandés.

2 Objetivos

2.1 General

Reunir autoridades gubernamentales: del sector privado, la academia y la sociedad, en un evento del más alto nivel, para analizar las metas de Desarrollo Sostenible del sector abastecimiento y alcantarillado, ya que representan un proceso global de resiliencia, uso eficiente de los recursos y la transición a una economía circular.

2.2 Específicos

- Atender la exhibición Aquatech (exhibición de 900 expositores, 21000 visitantes de 140 países) sobre: 1- Procesos productos y servicios de tratamientos de agua potable (incluyendo deslinización) aguas residuales, 2-Uso inteligente de redes de distribución, 3- Lo último en sistemas de bombeo, 4- Control de inundaciones: 2 participar de la semana de Conferencias Internacionales (disponibles 3 foros y 40 talleres). 3- Participar de las visitas de campo (9 posibilidades de visitas de campo).

3 Desarrollo del Informe

3.1 Antecedentes

Con fecha 7 de setiembre 2017 la Presidencia Ejecutiva recibió invitación de la Embajada de Holanda (Anexo 1), mediante el cual nos extendía una cordial invitación para asistir al “Amsterdam International Water Week”.

3.2 Agenda de la actividad

En los Anexos 2 y 3 se muestra la agenda de la actividad y la conformación del evento.

3.3 Desarrollo de la Agenda:

La agenda se desarrolló según lo indicado en el Anexo 2.

3.4 Visitas realizadas

Se visitaron las PTAR de Nereda y Step Filter, así como el Instituto IHE de la UNESCO.

4 Presentaciones

En el Anexo 3 (digital) se incluyen los resúmenes de 41 presentaciones del evento

5 Video

El Anexo 5 (digital) es un video de nuestra participación en la actividad.

6 Observaciones

Las presentaciones del Anexo 4 serán distribuidas por el suscrito a las áreas técnicas del AyA.

7 Anexos

Anexo 1:	Correo de invitación
Anexo 2:	Agenda de la actividad
Anexo 3:	Información del evento
Anexo 4:	Presentaciones
Anexo 5:	Video

ANEXO 1
CORREO DE INVITACION

Zeanne Mora Jimenez

De: "Saul Gerardo Trejos Bastos" <satrejos@aya.go.cr>
Fecha: miércoles 31 de enero de 2018 10:26 a.m.
Para: "Zeanne Mora Jimenez" <zmora@aya.go.cr>
Asunto: ANEXO 1

El 7 sep. 2017, a las 12:07, Douma, Amber <amber.douma@minbuza.nl> escribió:

Estimada señora Astorga

Espero se encuentre muy bien.

Le adjunto una invitación para un funcionario del AyA para asistir al Amsterdam International Water Week 2017.

Estamos planeando una misión centroamericana/ latinoamericana al AIWW 2017 que tiene lugar a finales de octubre, principios de noviembre del presente año.

El AIWW es una plataforma internacional que presenta soluciones innovadores para problemas actuales de agua en todo el mundo, tiene como objetivo inspirar, informar, mostrar y crear nuevas conexiones. Incluye seminarios, charlas, exposiciones, visitas de campo, eventos de matchmaking y actividades de intercambio de problemáticas y buenas experiencias
<http://internationalwaterweek.com/>.

Paralelamente tienen lugar el Aquatech, que es una exhibición de productos y servicios para el sector de agua y Floodex Europe que es un seminario sobre el manejo de las inundaciones, entre otros (abajo le pongo más información en inglés).

La idea es llevar entre 2 a 3 representantes por cada país en la región (donde tenemos embajadas) con el objetivo de que conozcan las soluciones holandesas en el tema de agua, que puedan compartir entre sí y que también puedan contar sobre sus experiencias locales, retos y buenas prácticas en esta plataforma internacional.

El funcionario que participe, preferiblemente es alguien del área de contrataciones o proveeduría de la organización.

Se le pide a cada organización que pague su propio tiquete y nosotros (El Ministerio de Asunto Exteriores de Holanda) financiaremos la estadía y la entrada al AIWW.

Las fechas del AIWW son del 30 octubre – 3 noviembre (Saliendo el sábado 28 de octubre y regresando el sábado 4 de noviembre).

Quedo a la espera de su respuesta.

Saludos cordiales

Amber Douma
Oficial de Diplomacia Pública/ Agua y Clima

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Embajada del Reino de los Países Bajos San José, Costa Rica
.....

T +506 2299-8807

<https://www.facebook.com/embajada.holanda.cr>

<https://www.paisesbajosytu.nl> (para extranjeros interesados en Holanda)

<https://www.nederlandwereldwijd.nl/> (para holandeses)

Download our free <image001.png> NL TradeMate App from [Google Play](#) and the [AppStore](#)

<image002.jpg>

ANEXO 2
AGENDA DE ACTIVIDAD

ANEXO 3
INFORMACION DEL EVENTO

Introduction

On behalf of the Dutch Ministry of Foreign Affairs, FME and the NWP we would like to welcome you to the Netherlands. We hope you have had a pleasant journey.

In this booklet you will find the schedule of your visit as well as some additional information which might be of interest during your stay in the Netherlands. If you have any other questions, please feel free to contact us at any time.

Last but not least, just in case you would like to practice a little Dutch, you can find a few basics below:

Hello = hallo

Good morning = goedemorgen

Good afternoon = goedemiddag

Thank you = bedankt

See you later = tot ziens

We are looking forward to a fruitful visit.

With kind regards,
also on behalf of FME and NWP,

Jurgen Bartelink
Regional Economic Envoy
Embassy of the Kingdom of The Netherlands

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In this document you will find the following information:

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 - V. Weather conditions
 - VI. Payment options
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- Appendix A: Information on companies & projects
 - Appendix B: Deltares Seminar – Discussion Topics
 - Appendix C: Matchmaking Tour: company information

I. KEY CONTACT PERSONS AT FME & NWP



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In case of Emergency: For police/ambulance/fire brigade call **112**

II. INFORMATION ABOUT THE AIWW PROGRAM

For this year's AIWW event, FME and the NWP have compiled an extensive program in order to get the most out of your stay in the Netherlands. A detailed program overview is outlined below. Descriptions of the organizations / projects that are incorporated in the program can be found in Appendix A.

Sunday (29th of October)

Morning/Afternoon Arrival of the delegation and transportation to the hotel
18:30 – 21:30 Welcome dinner at the Holiday Inn in Leiden

Monday (30th of October)

06:30 Breakfast
07:30 Bus departure to Deltares (Delft)
08:30 – 11:00 Seminar presentations: *Developing and implementing a climate resilient water strategy.*

- **08:30** Official opening
Given by Jan Busstra, *Head of Unit - Marine and International Water policy Ministry of Infrastructure and the Environment*
- **09:00** Seminar "Closing the gap between planning and project implementation to ensure financial and institutional sustainability".
 - 09:00 – 09:10: Introduction to Deltares' work in the region (by Gerard Blom, Unit Manager at Deltares)
 - 09:10 – 09:25: Innovative Financing of Water Security & Climate Adaptation
 - 09:25 – 09:50: FMO financing instruments and role in project development (By Louis Strydom, Business Development Manager at FMO, the Dutch Development Bank)
- **09:50** World Café discussion: Water Security and Implementation challenges in LAC. *Please find the Word Café Discussion / Questions in Appendix B*
- **10:30** Visit to Deltares iDLab facilities.

11:00 Bus departure to the RAI (Amsterdam). Lunch will be provided in the bus.
12:30 Arrival at the AIWW event.

**13:00**

Roundtable sessions, hosted by Henk Oving.

Room G103. Entry D, First floor, RAI- Europaplein, Amsterdam

In an interactive and constructive way, we aim to discuss two water related case studies geographically located in Colombia and Chile, with the aim to identify success factors in integrated water management approaches in those countries and cooperation perspectives.

- Chile: GIRAgua
 - Colombia: restoring the navigability in the Magdalena River
- **13:00** Word of welcome. Edilberto Baquero, Coordinator Latin America, Netherlands Water Partnership.
 - **13:05** Kick-off: water challenges and the prospect of integrated approaches and engaging partnerships by Henk Ovink, Special Envoy for International Water Affairs.
 - **13:25** Case pitches
 - **Chile:** GIRAgua. Cristian Baquedano, Innovation Manager-Water, Corporacion de Desarrollo Productivo Region de Coquimbo (CRDP)
 - **Colombia:** Magdalena River restoration project. Alfredo Varela, Director CorMagdalena
 - **14:10** Roundtable discussions (parallel)
 1. Short round of participant introductions per table
 2. Reiteration of the discussion objectives.
 3. Discussion on key points:
 - a. Integrated approach
 - b. Partnership/consortium members
 - c. Project activities (focus on outreach/stakeholder engagement)
 - d. Success factors
 - e. Perspectives for cooperation
 - **15:00** Short wrap up from the round table discussion
 - **15:25** Reflections on the outcomes and closure
 - **15:30** End of program

16:00

AIWW Opening Ceremony

17:30

Network Reception

18:45Bus departure to dining location (*please make sure to be on time*)**19:30**

Diner (Location is to be determined)



Kingdom of the Netherlands



Tuesday (31st of October)

07:00	Breakfast
08:00	Bus departure to RAI (Amsterdam)
09:00	Leadership program (including the mayor of Panama) -- <i>optional</i>
11:00	Three Parallel Matchmaking Tours <ul style="list-style-type: none">▪ Tour 1: Innovative Water Treatment▪ Tour 2: Water Management & Resilience▪ Tour 3: Industrial Waste Water For more information on the aligned companies per theme, please see appendix.
12:30	Lunch (at the AIWW)
14:00	Time to walk around the AIWW fair and / or attend conferences
16:30	Drinks at the Holland Pavilion
17:45	Transport to the hotel

The dinner is not incorporated in the program for this evening.

Wednesday (1st of November)

07:00	Breakfast
08:00	Bus departure to the Rai (Amsterdam)
09:00	AIWW morning program <ul style="list-style-type: none">▪ Option 1: walk the AIWW and visit the exhibitors▪ Option 2: attend the conference program▪ Option 3: 1-on-1 meetings with Dutch organizations or follow-up meetings with companies from the routes. These include:<ul style="list-style-type: none">• RoyalHaskoningDHV• Witteveen+Bos• Arcadis
12:30	Lunch
14:00	Walk the AIWW or attend a conference
15:00	Meet at the Holland Pavilion and depart to the hotel. <i>Please be on time!</i>
16:00	Time to relax & freshen up. <i>Please wear formal attire for the dinner.</i>
17:30	Bus departure to the Krasnapolsky Hotel (Amsterdam)
19:00	Diner at the Krasnapolsky Hotel
22:00	Transportation to the hotel in Leiden



Thursday (2nd of November)

Two separate group tours are planned for today, each with a distinct theme.

Theme 1: Water Efficiency & Value and Innovative Water System Implementations

Theme 2: Water Management & Resilience and Institutional Transition & Governance

Program Theme 1

- | | |
|----------------|--|
| 07:00 | Bus departure to the Nereda plant (Epe) |
| 09:00 | Visit to Waste Water Treatment Solutions - Nereda Royal HaskoningDHV
<i>Nereda offers sustainable wastewater treatment solutions for municipal and industrial water. The natural sewage treatment process purifies water without chemicals by using the patented aerobic granular sludge technology.</i> |
| ○ 09:00 | Presentation hosted by Rutger Pardon (Royal HaskoningDHV) |
| ○ 10:00 | Guided tour around the Nereda plant in which the operational aspects of the plant will be elaborated on. |
| 11:15 | Transport to the lunch location |
| 12:15 | Lunch (location is to be determined) |
| 13:15 | Transport to Horstermeer |
| 13:30 | Visit to 1-Step Filter (Witteveen+Bos, Waternet)
<i>"The world's first full scale 1-Step filter waste water treatment plant"</i>
<i>The 1-STEP® filter is an innovative compact fixed bed activated carbon filter operated at a relatively high rate downward flow combining four processes in one single additional treatment unit.</i> |
| ○ 13:30 | Presentation about the 1-Step Filter plant hosted by Coen de Jong, process engineer at Witteveen+Bos. |
| ○ 14:00 | Guided tour around the 1-Step Filter plant in which the operational aspects of the plant will be elaborated on. |
| 15:15 | Transport to dinner location |
| 16:15 | Presentation by Joachim van 't Hul (Landustrie B.V.) (tbc) |
| 17:00 | Drinks |
| 18:00 | Joint dinner (together with the group of theme 2) |

Program Theme 2

Please note that part of this program will be executed outdoors. Therefore, we would like to advise you to bring a warm coat and an umbrella. Your footwear might get a little wet / sandy as well.

- 07:00** Breakfast
- 08:00** Bus departure to The Hague
- 09:00** Introduction water management in the Netherlands. Focus on ICZM by Jan Busstra, *Head of Unit - Marine and International Water policy Ministry of Infrastructure and the Environment*
- Building with nature concepts and pilot projects by Arcadis and Deltares (tbc)
- Introduction Ecoshape (visionary development, scientific development, and market aspects)
 - Concrete NL examples of Building with nature concepts (a.o. sand motor) and showcases in LA region.
- 10:30** Bus departure to the Sand Motor (Kijkduin)
- The Sand Motor is a great example of building with nature. By depositing a large amount of sand in a single operation, we can avoid repeated disruption of the vulnerable seabed. Nature will take the sand to the right place for us. If the Sand Motor fulfils our expectations, sand replenishment off the Delfland Coast will be unnecessary for the next 20 years.*
- 10.45** Tour sand motor
- 12:00** Lunch (location is to be determined)
- 13:30** Bus departure to Werkendam (Room for the River project)
- 15:00** Visit to Room for the River project
- In the last 600 years, the polders of the Biesbosch were developed through sand accretion and land acclamation of a big lake. But the discharge of the rivers increased and the sea level rose. To create more space for the river, openings were made in the dikes in order to let the river flow over the land.*
- Presentation by:
- Dutch Water Authorities presentation and cooperation in Latin America
By Louis Bijlmakers, Manager International Cooperation of the Regional Water Authority De Dommel
 - Program Room for the River and project Noordwaard
By Anneke Heinecke, RWS (tbc)
- 15.45** Tour Noordwaard project
- The Noordwaard is an area of 4,450 hectares - around 6,000 football pitches - that borders on the Biesbosch National Park in Brabant and the Nieuwe Merwede. In the area's lively history, nature, water and humans alternated in determining the appearance of the landscape. Eliminating the polder increased*

the safety situation of the downstream area, because the river water can flow in and out of the Noordwaard during periods of high water.

16:45	Bus departure
18:00	Joint Dinner (together with the group of theme 1)
21:00	Transportation to hotel in Leiden

Friday (3rd of November)

For today, the group will be split in two groups as well.

Group 1: visit to UNESCO IHE (Delft) and the Maeslandkering.

Group 2: visit to Royal IHC and the Kinderdijk.

Program Group 1:

07:00	Breakfast
08:00	Transport to UNESCO – IHE, Delft
09:00	Unesco – IHE Delft program (tbc) <i>(more information will follow soon)</i>
11:15	Transport to the Keringhuis
12:00	Presentation about the Maeslandkering (including lunch), followed by a guided tour through the area. <i>(more information will follow soon)</i>
13:00	Transport to The Hague

~ Hereafter, the joint program will continue (see below)

Program: Group 2

06:30	Breakfast
07:30	Transport to Royal IHC, Kinderdijk
09:00	Presentation at Royal IHC, followed by a guided tour through their ship-building yard.
11:00	Departure to Kinderdijk site
11:15	Tour over the Kinderdijk, including lunch.
13:00	Transport to The Hague

Joint program

14:00	Evaluation & Follow-up at RVO
16:00	Network reception (including drinks and snacks) with the Head of Economic Missions, the local Embassies and other invited guests.
18:15	Transportation to the hotel

III. TRANSFER FROM THE AIRPORT TO THE HOTEL/VENUE

Transportation from Schiphol Airport of Amsterdam Station to the hotel will be arranged.

For more detailed information see separate document and Excel sheet.

IV. HOTEL INFORMATION

You will be staying at the Holiday Inn Leiden.

Address:

Haagse Schouwweg 10
2332 KG Leiden
Tel. (+31) 071 535 55 55

We have booked a room for you, including breakfast from Sunday (October 29th) until Friday (November 3rd). Other expenses in the hotel are for own account.

We hope you will enjoy it!

Please visit <http://www.hileiden.com/en> if you want to know more about the hotel, location and local attractions.



Electrical

Electrical Sockets used in the Netherland are 2 pins, grounded sockets at 220-240V and 16A. Please check <http://www.worldstandards.eu/electricity/plugs-and-sockets> for pictures and more information.

V. LOCAL TRANSPORTATION IN LEIDEN / THE NETHERLANDS

The transport during the mission, for the arranged programme elements is arranged by FME. However, if you want to 'move around' on your own, outside of the program, you may need to use some sort of (public) transportation. The public transportation system in the Netherlands runs throughout the country and is easy to use.

Bus and tram: There are two means of transportation within Leiden: bus or tram. There are several bus and tram stops near the Hotel. You can buy your ticket at the automated machine in the tram or bus for €3 or €2 respectively. The ticket will be usable for one hour. You can also buy a general transportation card, called the 'OV chipkaart', at the helpdesk at the train station. This card will cost € 10 and needs to be registered and 'checked-in' or 'checked-out' at the entrance/exit of the tram/bus/train when getting on and off the public transport. Transportation with this card is much cheaper, so it definitely pays off to purchase such a card.

To plan your journey see www.9292.nl

Train: The trains in The Netherlands are operated by the company NS. The main train station in Leiden is Leiden Central Station. The station has connections to all cities in the Netherlands, including Amsterdam, Amsterdam RAI but also Schiphol Amsterdam Airport.

For travel routes and departure times see www.ns.nl

Taxi: Taxis are available as passing by on the street, or by reservation. You can call the Taxi central Leiden +31 071 210 0210. Please be aware that traveling by taxi is quite expensive in the Netherlands.

VI. WEATHER CONDITIONS

The weather in the Netherlands can be very unpredictable. Meaning that it can both rain or the sun can shine on the same day. Therefore, it can be useful to carry an umbrella and wear different layers so you can adjust your outfit according to the weather.

Current forecasts predict the temperature to range from 9 to 12 degrees.

For up to date weather forecasts see www.weatherforecastmap.com.

VII. PAYMENT OPTIONS

In most places you can pay either with cash or credit card. Sometimes there is a minimum for credit card payments, or they might charge a small amount, 0,25 cent. There are plenty of ATM's and banks in the city and at the airport and train stations, where you can take out cash with your credit card.

VIII. CITY INFORMATION LEIDEN

Situated at what has traditionally been an important junction where waterways and roads cross stands a city that will enchant you: Leiden. The city is famous for its almshouses, university, museums and glorious history. The spirit of the Golden Age lives on here, a place where Rembrandt was born and inspired so many other influential painters. But even after this era Leiden continued to attract scientists, artists and industry. The canals, the historical buildings, the alleyways, the treasures of knowledge, culture and science: Leiden is definitely worth seeing.

By the end of the 15th century Leiden was the largest city in the county of Holland. This was largely due to the international cloth-making industry. The economic tide began to turn with the advent of the 16th century, however. The reformation led to mass prosecution of Protestants. In 1572 Leiden joined the Dutch resistance against Spain's oppression. The city was occupied by the Spanish.

The people of Leiden succumbed to disease and starvation and the Spanish nearly conquered the city. However, they successfully drove the troops out on 3 October 1574. The great liberation, known as Leidens Ontzet or the Relief of Leyden, is still lavishly celebrated today. This huge party is not the only result of the Spanish occupation; the city also allegedly was given the university as a reward for its heroic resistance.

The Relief marked the beginning of a new Golden Age. In 1577 tens of thousands of Dutch people from the south flocked to Leiden on account of their Calvinist faith. These were experienced textile workers and business people who helped revive the failing wool industry in Leiden with new products, techniques, capital and labour.

Leiden was the second largest city in the Republic after Amsterdam. The population quadrupled despite major plague epidemics. The city was expanded in 1611, 1644 and again in 1659 and the network of canals was laid out in its current incarnation. At the height of the boom around 1670 the city was densely populated by some 60,000 people.

Leiden University

In 1575, Leiden had the distinction of becoming the first city in the northern Netherlands to have a university. Legend has it that the university was a reward for the heroic resistance to the Spanish occupation. Leiden University became one of the leading universities in Europe and the tremendous degree of freedom of conscience stimulated the school's growth.

Decline and revolution

Leiden's wool industry was steadily declining in the 18th century: jobs dried up and people moved elsewhere. The downturn caused by the failing wool industry led to unrest. The ongoing war waged by Napoleon only aggravated the situation. The final straw came when Leiden was struck by catastrophic disaster. A ship carrying gunpowder exploded on 12 January 1807, destroying dozens of houses and killing at least 160 people.



Kingdom of the Netherlands



The 19th century

After 1815 the city began to show signs of recovery. Leiden's industry began to diversify in the second half of the century with emerging new sectors such as metal, printing and canning.

The beautiful retail buildings offer unequivocal proof that prosperity started picking up in the late 19th and early 20th centuries.

Metamorphosis

Leiden underwent a dramatic transformation during the last 30 years of the 20th century. In the 1960s, Leiden was a rundown industrial city with the university as its main claim to fame. By the early 1980s the industries had disappeared, and unemployment was rampant. However, the city managed to bounce back by tapping into new sectors.

The Leiden Bio Science Park and other high tech companies in the Leeuwenhoek deserve special mention. Today, Leiden has a low unemployment rate and one of the most highly educated populations in the Netherlands.

Nowadays, the restored historic city centre is an especially pleasant place to live. With all of its monuments, museums, ancient alleyways, canals and moats, Leiden also continues to attract an increasing number of tourists and day visitors who appreciate the city's charms.

Appendix A – Company / Project Overview

Deltares



Website: <https://www.deltares.nl/en/>
E-mail: info@deltares.nl

Deltares is an independent institute for applied research in the field of water and subsurface with five areas of expertise:



- **Flood risk:** the research conducted by Deltares improves the precision of our assessments of dike strengths, water level predictions, water heights and erosion, and allows for better risk appraisal.
- **Adaptive Delta Planning:** integrating technical knowledge on water, subsurface and infrastructure with governance and policy making.
- **Infrastructure:** Deltares focuses on reducing costs and risks when building in coastal regions, soft ground and at sea through innovative solutions.
- **Water & subsoil resources:** Deltares maps out current and future supplies of water (including groundwater) so that pre-emptive steps such as new solutions for water distribution and reservoir management can be taken to cope with shortages and other problems with water.
- **Environment:** developing knowledge about the quality of soil and water systems, and making that knowledge available through model and information systems for policymakers, managers and users.

Witteveen + Bos



Website: <http://www.witteveenbos.com/en/>
E-mail: info@witteveenbos.com

Witteveen+Bos is a company based in Deventer, the Netherlands that provides consultancy and engineering services worldwide in the fields of infrastructure, water, the environment, spatial development and construction. Their multidisciplinary approach to projects is the distinctive feature of the way they work. Their clients are governmental, commercial and industrial organisations, including various types of joint ventures and public-private partnerships.



Witteveen+Bos serves their clients from six offices in the Netherlands and ten international offices, which together hosts over 1000 specialists.

Arcadis



Website: <https://www.arcadis.com/en>

E-mail: info@arcadis.com



Arcadis' capabilities: *"Applying our deep market sector insights and collective design, consultancy, engineering, project and management services, we work in partnerships with our clients to create exceptional and sustainable outcomes throughout the lifecycle of their natural and built assets."*

Arcadis is a specialist in integrating water and environment with the built environment. They provide comprehensive approaches to urban development planning and design, landscaping, smart transportation, urban regeneration and marketing. International, water related projects include (but are not limited to) Water Security Mega Reservoirs (Doha, Qatar), Mundaring Water Treatment Plant (Mundaring, Western Australia), and a Water Management Advisory project in Jeddah, Saudi Arabia.

FMO



Website: www.fmo.nl

E-mail: info@fmo.nl



"At the heart of everything we do is our aim to contribute to a world in which, in 2050, more than 9 billion people live well and within the means of the planet's resources"

FMO provides long-term investment plans that allow businesses to grow. They are predominantly focused on projects in Asia, Africa and Latin America. Their areas of expertise lie in:

- Agribusiness:

FMO invests across the value chain - enhancing food security, supporting sustainability and promoting inclusive development.

- Energy:

FMO enhances global clean energy development that promote the transition to a low-carbon system and safeguard energy security.

- Financial Institutions:

FMO offers a range of financial products including long-term loans, private equity, trade finance, mezzanine, and other tailor-made products.

- Infrastructure, Manufacturing & Services:

FMO finances companies and projects that contribute to inclusive and sustainable infrastructure and manufacturing development.

1-Step Filter – Water Treatment Plant (project by Nijhuis Industries, Witteveen+Bos & Waternet)

At present, removal of nutrient, heavy metals and micro pollutants from municipal wastewater require extensions and additional treatment units at existing WWTWs, leading to high investment and operational cost. The 1-STEP® filter is an innovative compact fixed bed activated carbon filter operated at a relatively high rate downward flow combining four processes in one single additional treatment unit.



carbon.

Besides removal of suspended solids by filtration, it performs excellently on nitrogen removal by simultaneous biological denitrification (using a selective carbon source), chemical phosphate and heavy metals removal (by coagulation and flocculation with a low dose of metal salt) and, if required, removal of organic micro pollutants by adsorption to the activated

Royal IHC



Website: www.royalihc.com
E-mail: info@royalihc.com



With a history steeped in Dutch shipbuilding since the mid-17th Century, Royal IHC has in-depth knowledge and expertise of engineering and manufacturing high-performance integrated vessels and equipment, and providing sustainable services. From their head office in The Netherlands and with more than 2,700 employees working from sites and offices on a global basis, they are able to ensure a local presence and support on every continent.

Dredging operators, oil and gas corporations, offshore contractors, mining houses and government authorities all over the world benefit from IHC's high-quality solutions and services. They have offices and production locations worldwide, including in São Paulo, Brazil.



Kingdom of the Netherlands



Website: www.un-ihe.org
E-mail: info@un-ihe.org

IHE Delft
water



Institute for Water Education is the largest international graduate education facility in the world.

They

aim to create impact on the ground by developing problem oriented researchers and knowledge. Research themes include, but are not limited to:

- Increasing access to safe, sufficient and affordable water for people to meet the basic needs for drinking, sanitation, and hygiene.
- Water-related hazards like floods, droughts and pollutions & climate change.
- Water & Ecosystems quality.
- Water Management & Governance: research is centered on the conviction that the social, biophysical and technological processes of water systems are intrinsically linked.
- Water, Food & Energy security.

Nereda plant Epe (by Royal Haskoning DHV)



Nereda offers sustainable wastewater treatment solutions for municipal and industrial water. The natural sewage treatment process purifies water without chemicals by using the patented aerobic granular sludge technology.

Compared to activated sludge technologies, the biological treatment power of Nereda is much larger while saving 50% on energy-costs, delivering high quality effluent for low costs and requiring only a quarter of the area of conventional activated sludge installations.

Appendix B – World Café Discussion

Objectives:

1. Identify key needs and priorities of the different countries- in terms of types of expertise, information, models and others along the investment planning cycle
2. Validate with the group the need for a Financing Framework for Water Security (Decision Support Framework to engineer an implementation/financing arrangement)
3. Identify key players and important initiatives already taking place in the region
4. Identify pioneering or high impact projects that need support in becoming bankable

Questions being considered for World Café discussion

Planning approaches

1. Which approaches are being used in their country for the development of water strategies? (IWRM, Water Stewardship, WRG2030/Cost curve, etc).
2. How do they engage and navigate through the differences and commonalities of these approaches? What are the strengths and weaknesses of each of them that they perceive? How challenging is to work and combine the preferences of these different stakeholders with the national priorities and own process design?

Achieving Water Security/ Financing and project preparation

1. Where do they experience the major challenges, indicate from 1 to 5 major challenges along the project cycle.
2. Specify – what is the challenge or gap? Data, information, expertise, technology, funding, financing, governance; what exactly?
3. What is the value added and role of Watershed / water balance models in investment planning?
4. Give a concrete example or express the magnitude of the challenge. (e.g. Climate funds are not being used due to little regional government capacity to prepare and structure water/environmental projects; or average X months delay, >5% costs of projects go in project preparation)
5. Are these challenges different at national versus local government level?
6. Who is responsible for DRM? Who is responsible for IWRM? – and which types of funding and financing mechanisms? (Fill in Format/ Inventory of instruments)
7. Do you have project development facilities? For which type of projects? How are these organized?
8. How do you finance the step from master plan to project ready to be tendered? And besides funding/finance, what is an additional bottleneck? Explanation of 5 BC's
9. Are current financing instruments being offered by MDB's, regional development banks (CAF, BCIE, etc) and national banks enough support to speed up the implementation of



Water Security plans? **Mention the top 5 instruments you often make use of, per bank.** If not, which gaps are there? And which type of solution you would propose?

10. Which are the top 3 national or transboundary water projects that require support in project preparation? Could you describe briefly their cash and risk profile?

Appendix B – World Café Discussion

Objectives:

5. Identify key needs and priorities of the different countries- in terms of types of expertise, information, models and others along the investment planning cycle
6. Validate with the group the need for a Financing Framework for Water Security (Decision Support Framework to engineer an implementation/financing arrangement)
7. Identify key players and important initiatives already taking place in the region
8. Identify pioneering or high impact projects that need support in becoming bankable

Questions being considered for World Café discussion

Planning approaches

3. Which approaches are being used in their country for the development of water strategies? (IWRM, Water Stewardship, WRG2030/Cost curve, etc).
4. How do they engage and navigate through the differences and commonalities of these approaches? What are the strengths and weaknesses of each of them that they perceive? How challenging is to work and combine the preferences of these different stakeholders with the national priorities and own process design?

Achieving Water Security/ Financing and project preparation

11. Where do they experience the major challenges, indicate from 1 to 5 major challenges along the project cycle.
12. Specify – what is the challenge or gap? Data, information, expertise, technology, funding, financing, governance; what exactly?
13. What is the value added and role of Watershed / water balance models in investment planning?
14. Give a concrete example or express the magnitude of the challenge. (e.g. Climate funds are not being used due to little regional government capacity to prepare and structure water/environmental projects; or average X months delay, >5% costs of projects go in project preparation)
15. Are these challenges different at national versus local government level?
16. Who is responsible for DRM? Who is responsible for IWRM? – and which types of funding and financing mechanisms? **(Fill in Format/ Inventory of instruments)**
17. Do you have project development facilities? For which type of projects? How are these organized?



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18. How do you finance the step from master plan to project ready to be tendered? And besides funding/finance, what is an additional bottleneck? **Explanation of 5 BC's**
19. Are current financing instruments being offered by MDB's, regional development banks (CAF, BCIE, etc) and national banks enough support to speed up the implementation of Water Security plans? **Mention the top 5 instruments you often make use of, per bank.** If not, which gaps are there? And which type of solution you would propose?
20. Which are the top 3 national or transboundary water projects that require support in project preparation? Could you describe briefly their cash and risk profile?

Appendix C: Matchmaking Tours

Date: Tuesday 31 October 2017
 Time: 11:00 – 12:00
 Location: Aquatech

Maximum of 10 persons per tour.
 Three themes.

Route 1: Innovative water systems (tbc)

<p>1. Water Alliance</p>	<p>WaterCampus Leeuwarden</p> <p>WaterCampus Leeuwarden, with Wetsus, CEW and Water Alliance, stimulates cooperation between (inter)national businesses, educational institutes and governments within the water technology sector, in order to create synergy for world class innovation, education and entrepreneurship. This strengthens the global position of the European water technology sector. Additionally, WaterCampus offers a unique research infrastructure, and is a meeting point for scientists and companies from all over Europe.</p>
<p>2. Nijhuis</p>	<p>Sustainable Water Use & Resource Recovery</p> <p>Nijhuis Industries delivers solid solutions for sustainable water use & resource recovery, with the highest level of intelligent innovations across a wide range of industries. We meet today's challenges as well as those of the future, as a response towards a CIRCULAR economy in a 'fluid' world. To accommodate the customer requirements, Nijhuis offers customized installations, to create profit out of (waste)water, process water and waste.</p>
<p>3. MicroLAN</p>	<p>On-line Biomonitoring Systems</p> <p>microLAN, based in Waalwijk, the Netherlands, is a company specialized in early warning systems for water quality monitoring, based on optical measurements. The company started in 2003 as a trade agency for water quality measuring equipment, including lab and online testing for aquatic toxicity and algae monitoring. In 2014 microLAN took over a patent for automated on-line monitoring of enzymatic activities in water which it applies for monitoring bacterial water pollution. Through this addition.</p>
<p>4. DMT</p>	<p>Sustec provides sustainable technologies for a circular economy. With a focus on sludge treatment and resource recovery, we offer our customers consultancy services, laboratory and pilot testing, licencing, design and engineering, contracting and operational support.</p> <p>With a strong focus on R&D we are continuously investigating new possibilities for the next generation TurboTec® and Nutritec® installations. In combination with entrepreneurship, professionalism and integrity, we can offer our customers a wide range of solutions resulting in reliable and excellent projects/services.</p>



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	Global Water Summit 2010.
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Route 3: Industrial waste water treatment (tbc)

1. Paques	<p>Leading in biological wastewater & gas treatment</p> <p>Biotechnology that purifies water and gas is Paques' profession. Revitalizing resources is our motto. Paques helps companies to contribute to the major challenges of today: to reduce water, carbon footprints and reclaim valuable resources. Paques' anaerobic water purification systems produce energy from wastewater, whilst purifying the water and facilitating water reuse. The biogas produced in the purifying process is a source of green energy.</p>
2. Colubris	<p>Water, recycling and biobased technologies</p> <p>Colubris Environment consists of five brands, each specialized in their own field of cleantech solutions: Redox Water Technology, Redox Waste Recycling, Ingenieursbureau Schneider, K-Pack Water Technology and UCY waste water to energy. Specialists who work independently for selected issues, but also collaborate to create big impact with smart solutions. To ensure the best quality from idea to realization, we fabricate all our equipment in our own Colubris production factory in the Netherlands.</p>
3. Berghof	<p>Tubular Membranes and Modules, OEM Module Racks</p> <p>Berghof Membrane Technology, part of the Berghof Group, is one of the leading "made in Germany" suppliers of tubular membrane products. For more than 35 years we develop and manufacture high quality membrane products and innovative filtration concepts like BioFlow, BioPulse and BioAir DS. Our products are successfully being used in a wide range of water and waste water applications (MBR-technology). We sell our products and services through our international OEM-partners, agents and distributors</p>
4. LG Sonic	<p>Leading in ultrasonic algae control</p> <p>Since 1999, LG Sonic has been a leading international manufacturer of algae control systems. Our products provide an environmentally friendly solution to effectively control algae in lakes, reservoirs, treatment plants, and other applications. Over the last decade, more than 10,000 LG Sonic products have been successfully installed in 52 different countries.</p>
5. Hubert Staveren	<p>Hubert is supplying a wide range of products, from small screw pumps till complete water intake systems and water treatment equipment. Hubert has customers all over the world and places a great deal of importance on personal contact in order to meet their demands and provide the requested service.</p>
6. Landustrie	<p>Worldwide specialist in water technology</p> <p>With more than a century of worldwide experience Landustrie is one of the leading companies in handling wastewater. We design, construct and install mechanical equipment for sewage and wastewater treatment plants, all kinds of pumping stations, pumps and screen cleaning equipment.</p>



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	<p>Main products are Archimedes screw pumps, hydropower screw turbines, aeration equipment, screen cleaners and wastewater pumps.</p>
7. RWB	<p>Systems and solutions for (waste) water treatment</p> <p>RWB specializes in the design, construction and installation of complete (waste) water treatment plants for a wide range of (industry) sectors. RWB stands out by supplying standard systems as well as developing customer specific solutions. At Aquatech 2017 RWB focusses on waste water reuse according to the Zero Liquid Discharge principle.</p>

<p>5. Bluecon</p>	<p>Bluecon® International offers proven, compact wast</p> <p>Bluecon® International offers proven, compact wastewater purifying units, in which domestic wastewater is blueconized into irrigation water. Blueconizing is a new physical technology to purify wastewater, to optimize the water cycle. The ability to blueconize domestic wastewater from villages and small towns (500-10,000 inhabitants) into irrigation water quality, fits well in an environmental sustainable policy with re-use of water.</p> <p>COMPACT AND MODULAR UNIT Unlike large-scale investments in conventional</p>
<p>6. Lenntech</p>	<p>Tailor-made water treatment solutions</p> <p>Lenntech is a vibrant and international company, situated nearby the technical university of Delft, the Netherlands. With an experienced team of sales, environmental, mechanical and electrical engineers we can offer a wide variety of solutions for industries that require a certain water quality. Lenntech has provided water treatment solutions for all types of applications, from our standardized Lenntech products to industrial turnkey plants with a capacity up to 5000 m³/day.</p>
<p>7. Solteq</p>	<p>Free Freshwater & Electricity with one Windmill</p> <p>Windmill with heights of 15m and up; On and Off-grid operation possible; SolteQ customizes your System; For all requirements the right solutions; SolteQ's innovations for clean energy and a clean Planet. 100% without using the earths fossile reserves!</p>
<p>8. Van Essen</p>	<p>DIVER: Dedicated to groundwater level data</p> <p>Van Essen Instruments offers a complete portfolio with regards to technology as well as advice in the field of groundwater monitoring networks. Reliable and accurate sensors are being combined with the latest developments in the field of wireless communication and data visualization. Van Essen Instruments not only offers high-quality groundwater data but also solutions to manage a groundwater monitoring network more effective and efficient.</p>

Route 2: Water management and Resilience (tbc)

<p>1. Royal Haskoning DHV</p>	<p>consultancy, engineering and technology provider</p> <p>Royal HaskoningDHV, headquartered in Amersfoort (the Netherlands), is an independent, international engineering consultancy service and technology provider with over 130 years of experience. Our professionals deliver services in the fields of aviation, buildings, energy, industry, infrastructure, maritime, mining, transport, urban and rural planning and water. Backed by expertise and experience of 6,000 colleagues across the world, we work in more than 150 countries.</p>
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<p>2. Eijkelkamp</p>	<p>Eijkelkamp Soil & Water maakt wereldwijd het verschil door oplossingen voor bodem- en wateronderzoek te ontwikkelen, produceren en leveren.</p> <p>Eijkelkamp Soil & Water is over de hele wereld betrokken bij bodem- en waterprojecten binnen de thema's Land degradatie, Voedselzekerheid, Verstedelijking, Vervuiling, Land ontwikkeling en Natuurlijke hulpbronnen.</p>
<p>3. Pentair</p>	<p>Pentair, Inspired Solutions for a Changing World</p> <p>X-FLOW We develop and supply high-quality innovative membrane technology for the filtration, separation, concentration, and purification processes of water and wastewater</p> <p>CODELINE Codeline housings maximize the performance of water purification systems. With Codeline we hold one of the most trusted brands for pressure vessels for critical and demanding applications</p> <p>AQUALINE Aqualine is a liquid filtration solutions that provides superior flow rates and guarantees long-lasting performance.</p>
<p>4. Paques</p>	<p>Leading in biological wastewater & gas treatment</p> <p>Biotechnology that purifies water and gas is Paques' profession. Revitalizing resources is our motto. Paques helps companies to contribute to the major challenges of today: to reduce water, carbon footprints and reclaim valuable resources. Paques' anaerobic water purification systems produce energy from wastewater, whilst purifying the water and facilitating water reuse. The biogas produced in the purifying process is a source of green energy.</p>
<p>5. MTD</p>	<p>Temporary water and waste water treatment</p> <p>MTD offers its clients a comprehensive full-service organisation plus turn-key solutions for the installation of temporary water infrastructures and water treatments with the guarantee of safe drinking water. We can manage and control the total water chain. Innovation, knowledge and quality make MTD a company that continues to be ahead of the game.</p>
<p>6. BestUV</p>	<p>BestUV is a Dutch manufacturer (OEM) of UV systems</p> <p>bestUV is an innovative manufacturer of professional ultraviolet (UV) water treatment systems for industrial and municipal markets. Equipment is sold worldwide for applications in potable water, waste water and process water treatment. Next to that, products for special applications like swimming pools, ballast water treatment and aquaculture are provided. UV reactors are optimized with "in-house" Computational Fluid Dynamics. bestUV is an ISO9001 certified company.</p>
<p>7. Voltea</p>	<p>World Leader in Membrane Capacitive Deionization</p> <p>Voltea is a world leading company in Capacitive Deionization (CapDI).</p> <p>Voltea's technology is tunable, scalable, and helps consumers and industries reduce water consumption, chemical usage, and operation expenses.</p> <p>Voltea was recognized at the World Economic Forum 2013, Global Cleantech 2011 and won the award for best new technology at the GWI</p>

ANEXO 4
PRESENTACIONES

ANEXO 5

VIDEO

