



Symposium
Flanders Wise With Water

Friday June 17th 2016

Flanders Wise With Water

**Symposium at the Palace of the Academies
Hertogsstraat 1, Brussels
Auditorium Albert II
Friday June 17th 2016**



Climate change is a fact. The challenge arises to develop an adaptation strategy and deal with its consequences. Rather than focusing on the negative aspects, this symposium aims to provide an alternative perspective. Top speakers from Flanders and abroad present a positive narrative about climate change and resilience in the context of water.

Margaret Catley-Carlson (Patron Global Water Partnership Canada) and Glen T. Daigger (former chairman of the International Water Association) were the two Thinkers-in-Residence at the Royal Flemish Academy of Belgium for Science and the Arts (KVAB) for the 2016 Thinkers Programme on Water & Climate. They worked with stakeholders in Flanders in order to write a report formulating long term policy objectives for Flanders and beyond. Today, Friday June 17, they present their findings. National and international experts can respond and nurture the debate about climate and future water management.



9:00-9:30 **Coffee and Registration**

9:30 **Newsflash press conference**

Welcome by

Hubert Bocken, President of the Academy

Willy Verstraete, Coordinator Thinkers Programme Water & Climate

10:00-10:45 **Presentations by the Thinker Team**

Chair: Erik Mathijs

Margaret Catley-Carlson

Glen Daigger

Caroline Van Steendam

Q & A

10:45-11:15 **Tea/Coffee Break**

11:15-12:00 **A selection of Governance Issues raised in the report**

Chair: Erik Mathijs

Hans Bruyninckx, European Environment Agency

Jacqueline Cramer, Utrecht University - Former Dutch Minister of Environment and Spatial Planning

Philippe D'Hondt, Flanders Environment Agency (VMM), Coordination Committee on Integrated Water Policy (CIW)

12:00-13:00 **A selection of Science & Technical Issues raised in the report**

Chair: Joos Vandewalle

Iven Mareels, University of Melbourne

Frank Verschraegen, DEME

Erik Mathijs, KU Leuven

Ronald Waterman, Building with Nature

13:00-14:00 **Break/Informal Lunch**

14:00-14:45 **Young Water Professionals - Battle of Talents**

Topic: Water Awareness

Chair: Ilse Smets & Caroline Van Steendam

Bart De Vos, Goodplanet

Arne Verliefde, Paint, UGent

Maarten Desmet, For Good

Frederik De Laender, UNamur, UGent

Samuel Van de Vijver, UAntwerpen

Korneel Rabaey, UGent

Q & A

14:45-15:45 *Pitches on Key Flanders Water Management Issues*

Chair: *Willy Verstraete*

Tom Williams, IWA
Wim Van Gils, Natuurpunt
Dirk Van der Stede, VITO/VLAKWA
Willy Bauwens, VUB
Jos Boere, KWR
Marnik Vanclooster, UCL
Thomas Van Waeyenberghe, Aquafed
Ann Overmeire, POM West-Vlaanderen
Jan Seys, VLIZ Flanders Marine Institute
Marc Despiegelaere, Protos
Maaïke Breugelmans, Stad Gent
Rudy Gotzen, Boerenbond
Jeroen Buysse, UGent

15:45-17:00 *Pro Action Café*

Discussion in small groups - participants may choose two tables of each 30'.

1. *Too much and too little: better preparation for flood and water shortages*

Coordinators: *Ilse Smets and Ingmar Nopens*

2. *Coastal defenses: standing up to nature or building with it: costs and issue*

Coordinators: *Jean Berlamont and Frank Verschraegen*

3. *Organizing Agriculture to enhance Ecosystem Services*

Coordinators: *Patrick Meire and Jeroen Buysse*

4. *Water & resilience*

Coordinators: *Erik Mathijs and Luuk Boelens*

5. *Out of the box!*

Coordinators: *Frederik De Laender and Arne Verliefde*

17:00 *Report back to plenary*

17:30 *Closing lecture by Jan Peumans*

17:45 *Official closing by Willy Verstraete*

Network Reception

#flanderswaterwise



Margaret Catley-Carlson, Thinker-in-residence

Margaret Catley-Carlson operates within Boards of Organizations focused on improved water resource management and agricultural productivity and rural development, serving with 20+ in the last decades. Now PAC Chair of the International Commission on Integrated Mountain Development (ICIMOD), Vice Chair Canadian Water Network Board, member Syngenta Foundation for Sustainable Development, International Fertilizer Development Council, International Food Policy Research Institute (IFPRI). She is a Patron/ past Chair Global Water Partnership, member of the Council of Advisors of the World Food Prize, Library of Alexandria in Egypt, and the Robert Daughterly Institute on Water for Food production. Jurist of the Tyler and Stockholm Water Prizes; President Canadian International Development Agency 1983-89; Deputy Executive Director UNICEF New York 1981-1983; President Population Council New York 1993-98; Deputy Minister Health and Welfare Canada 1989-92. Ms. Catley-Carlson has ten honorary degrees and is an Officer of the Order of Canada.



Glen Daigger, Thinker-in-residence

Dr. Glen T. Daigger, Ph.D., P.E., BCEE, NAE is currently Professor of Engineering Practice at the University of Michigan and President and Founder of One Water Solutions, LLC, a water engineering and innovation firm. He previously served as Senior Vice President and Chief Technology Officer for CH2M HILL where he was employed for 35 years, as well as Professor and Chair of Environmental Systems Engineering at Clemson University. Actively engaged in the water profession through major projects, and as author or co-author of more than 100 technical papers, four books, and several technical manuals, he contributes to significantly advance practice within the water profession. Deeply involved in professional activities, he is currently Immediate Past President of the International Water Association (IWA). The recipient of numerous awards, including the Kappe, Freese, and Feng lectures and the Harrison Prescott Eddy, Morgan, and the Gascoigne Awards, he is a Distinguished Member of the American Society of Civil Engineers (ASCE), a Distinguished Fellow of IWA, and a Fellow of the Water Environment Federation (WEF). A member of a number of professional societies, Dr. Daigger is also a member of the U.S. National Academy of Engineers.

Caroline Van Steendam, Associate Thinker-in-Residence

Caroline Van Steendam is a PhD candidate, pursuing a degree in Environmental Engineering at the University of Michigan and in Chemical Engineering at the University of Leuven (KU Leuven, Belgium). Co-advised by Profs. Ilse Smets, Steven Skerlos, Lutgarde Raskin, she is spearheading a pilot-scale and bench-scale study to decrease impacts related to wastewater treatment by facilitating widespread implementation of anaerobic membrane bioreactors. To further support this endeavor, she is currently performing a life cycle assessment to identify the field in which this technology constitutes a more sustainable option than current alternatives. She was awarded with the 'TNAV prize: Best Thesis regarding Water and Sludge Technology' for her Master's Thesis (Chemical Engineering, KU Leuven) and recently received the honor of becoming an ITiMS fellow (Integrated Training in Microbial Systems). As an officer for GrEENPEAS (a departmental organization aspiring to bring students and faculty closer together) and the outreach-officer for the Society of Women in Engineering (SWE) at the University of Michigan, she organizes many educational and engaging events for students of all ages.



Coordinator

Willy Verstraete, UGent

Willy Verstraete, professor and head of the Laboratory of Microbial Ecology and Technology (LabMET - Faculty of Bioscience Engineering) at Ghent university, since 2011 emeritus. He has field experience with respect to drinking water production plants (slow sand filtration), aerobic wastewater treatment (in particular with respect to nitrification-denitrification), anaerobic digestion of wastewaters and sludges, solid state fermentation of organic residues and bioremediation processes of soils and sediments. Current activities: Dutch KWR institute, Nanyang Technical University Singapore, Board of the FWO. Excellence in Science Prize (FWO-Belgium), Imhoff Award of the International Water Association, Einstein Professorship Chinese Academy of Applied Sciences, Highly Cited Researcher Web of Science. Willy Verstraete is a member of the Royal Flemish Academy of Belgium for Science and the Arts and is coordinator of the 2016 Thinkers Programme Water & Climate.





Hans Bruyninckx, Executive Director, European Environment Agency (EEA)

Dr. Hans Bruyninckx became the Executive Director of the European Environment Agency on 1 June 2013. In 1996 he completed a PhD in international environmental politics at Colorado State University and since 2010 headed the HIVA Research Institute in Leuven which specializes in policy research. Over the last 20 years, he has conducted research in more than a dozen countries, in areas including environmental politics, climate change, and sustainable development.

European perspectives on water management

The presentation will link the water aspects highlighted in the report as part of a broader transition to a green economy. The green economy concept has the potential to provide solutions for water management and governance.



Jacqueline Cramer, Professor of Sustainable Innovation, Utrecht University - Former Dutch Minister of Environment and Spatial Planning

Prof. dr. Jacqueline Cramer is professor in sustainable innovation at Utrecht University, strategic advisor of the Utrecht Sustainability Institute and member of the Amsterdam Economic Board, particularly in charge of the circular economy. Moreover, she is director of the consultancy firm 'Sustainable Entrepreneurship; strategy and innovation consulting'.

Before she was Minister of Housing, Spatial Planning and the Environment for the Labour Party (February 2007 – February 2010). Her background is primarily related to industry, working as a consultant for many years with more than 150 companies on the implementation of sustainable entrepreneurship and corporate social responsibility. Moreover she worked as part-time professor since 1990.

She was and still is member of various (inter)national advisory boards of the government, industry and non-profit organisations (e.g. previously crown member of the Dutch Social-Economic Council, member of the Advisory Board of the World Wide Fund for Nature (WWF)/Netherlands, member of the non-executive board of Shell Netherlands and FMO (Finance for Development Bank) and presently among others chairman of the Dutch Banking Sector Agreement on international responsible business conduct regarding human rights, the Plastic Soup Foundation, Nudge and the ESCo (Energy Service Companies) Netherlands network).

Water as key resource for cities

An increasing concentration of the world population lives in urban regions. In 2014 it was 54% and by 2050 it is expected to be ± 70%. This may threaten the quality of life in cities. One of the key resources at stake is water because of four reasons: 1. security of water provision, water quality, safe/healthy drinking water; 2. adaptation to climate change; 3. closing of

water cycles and 4. relation between water use and use of energy, nutrients and waste streams. The lecture of Jacqueline Cramer addresses the opportunities to deal with these four issues in a sustainable manner. It will be concluded that every part of the water chain has been optimized rather well, but not the chain as a whole. The ecological and economic performance of the water chain can be improved substantially by providing safe and clean drinking water, a climate resistant water management, closing of water cycles and adopting an integrated chain-oriented approach taking into account water, energy and raw materials.

Philippe D'Hondt, Director-general Flanders Environment Agency (VMM), Chairman Coordination Committee on Integrated Water Policy (CIW)

Philippe D'Hondt is MSc Chemistry and MSc Environmental Sanitation. He first worked as research assistant on air emissions at the University of Ghent. Later on, for more than 12 years, he was head of unit at the Management Unit of the North Sea Mathematical Models. Since 1993, he works at the Flanders Environment Agency (VMM), first as Head of Department Monitoring and Research, then as Head of Department Air, Environment and Communication. In 2014, he became the Director-General of VMM. He is currently also chairman of the Coordination Commission Integrated Water Policy (CIW), Water Director for the Flemish Region for the implementation of the EU WFD, and Head of the Flemish delegation in the Scheldt and Meuse Commissions.



How Wise is the Integrated Water Policy in Flanders

Since 2003, the Decree on Integrated Water Policy constitutes the framework for an integrated water policy in Flanders. The decree transposes the Water Framework Directive and the Floods Directive. The choice to implement those two directives through the same legal basis is quite unique in Europe, and guarantees an integrated approach of water management.

Also with regard to the content the decree aims at this integrated approach: it seeks for a maximum integration of all aspects (such as quality, quantity and spatial aspects) and all uses of the water system, and introduced coordination and consultative structures for an integrated water policy. It also provides specific instruments that strengthen the links between water policy and spatial planning.

The Coordination Committee on Integrated Water Policy (CIW) has a central role in the integrated water policy. The CIW brings the water managers and the managers of related policy areas such as nature, mobility, agriculture and spatial planning together. The CIW is a coordination and consultative structure that searches for sustainable and shared solutions through cooperation with respect for the identity, the interests and competences of the concerned organizations. It respects the competence of the individual members, but at the same time it encourages the authorities to take account of the water system in their policy decisions.

Over the last 10 years the work of the CIW has resulted in various legislative initiatives, plans, tools and other instruments towards a better integration of water policy. Significant progress has been made particularly in the area of integrating water policy and spatial policy. A closer look at the recent results and planned initiatives of the CIW in relation to climate adaptation will be presented. These good practices will demonstrate "how wise the integrated water policy in Flanders" is.



Iven Mareels, University of Melbourne

Iven Mareels is Redmond Barry Distinguished Professor and Dean of the School of Engineering at the University of Melbourne, Australia. He studied electro-mechanical engineering at Ghent University, and completed a PhD at the Australian National University. He is a Fellow of the IEEE and the Academy of Technological Sciences and Engineering (ATSE) in Australia, as well as a foreign member of the KVAB. In 2008 he received the Clunies Ross Medal from ATSE for his work on intelligent water systems.

Intelligent Water Systems

About 70% of the world's water usage goes towards irrigation and ultimately food production. In most circumstances the technology behind irrigation is Sumerian in nature, and typical extraction efficiency (water reaching a plant vs water extracted from the environment) is below 50%. Using modern control and communication engineering ideas, one can implement a measure-model-manage approach changing the operations of large scale irrigation systems dramatically and achieve benefits such as better than 80% extraction efficiency and 100% gain in the production of dry matter per unit of water. In collaboration with Rubicon Water Pty Ltd, the University of Melbourne has developed this systems engineering approach to large scale irrigation systems and results from this 20 year collaboration, with more than a decade of commercial system results to draw from, will be (briefly) presented.



Frank Verschraegen, DEME

Frank Verschraegen has degrees in Electromechanical Engineering (University of Ghent, Belgium – 1987) and in Industrial Management (Catholic University of Louvain, Belgium – 1988).

After successful completion of innovative projects in several high tech environments (s.a. VITO and i2), he became General Manager of the European Operations for IMCORP, a US-based company specialised in state-of-the-art monitoring and diagnosing high voltage cables.

In 2011 he joined the company DEME as project leader, focusing on innovative offshore energy applications and blue growth.

The Blue Cluster - a project with guts

The Blue Cluster aims to tackle different welfare challenges at the same time in response to the urgent need of giving an adequate answer at the long term to the rising level of the North sea. By a multidisciplinary approach of innovation a new élan will be given to the Flemish economical structure to reinforce our competitive position and to create jobs.

The Blue cluster is based on a coastal protection by Nature by building a series of islands and atolls. Those infrastructural investments will give the opportunity to restore the ecosystem of the North sea and will guarantee a healthy and cheap fish production. Feed stocks will be created over 100 km² with important spin-offs for the food-industry, pharmaceutical industry, cosmetic, textile and energy.

The Blue cluster provides a multi-cash flow approach: coastal protection; healthy food, blue energy and innovative telecommunication.

Erik Mathijs, KU Leuven

Prof. Dr. Ir. Erik Mathijs is Full Professor of Agricultural and Resource Economics at the Department of Earth and Environmental Sciences of the KU Leuven, Belgium. He holds an M.Sc. in Bioscience Engineering (KU Leuven, 1991) and a Ph.D. in Agricultural Economics (KU Leuven, 1998). His research focuses on the transformation of the agricultural and food system towards sustainability and resilience and more specifically on the role of niche innovations, such as agro-ecology, organic farming, community-supported agriculture, insect rearing, biofuel crops, etc. He is coordinator of the FP7 project TRANSMANGO and the Horizon2020 project SUFISA—both on the transformation of the European agricultural and food system. He acted as rapporteur and chair of the expert group of the 3rd (2011) and 4th (2015) Foresight Exercise for the EU's Standing Committee on Agricultural Research (SCAR). He has been coordinator of the Flemish Policy Research Centre for Sustainable Development (TRADO) up to 2016.



The Agro-food system wise with water

Our agro-food system is an important user of water, both directly and indirectly, through the virtual water embodied in the products we import from abroad. It also has an important impact on water quality following the use of fertilizers and pesticides. However, the agro-food system can play a positive role in the management of both too much and too little water. This presentation discusses how this can be done by both technological advances – such as precision agriculture, nutrient recycling and novel food processing techniques – and land management approaches, enhancing the ecosystem services that soils can provide to society.



Ronald Waterman, Building with Nature

Dr. Ronald E. Waterman MSc is dedicated to finding answers to the question how can we – by creating added value – develop well-balanced and integrated solutions in the fields of space, economy and environment to existing and future problems in vulnerable densely populated areas.

Ronald Waterman is a specialist with 35 years of worldwide experience in the field of integrated multifunctional sustainable coastal & delta zone development based on the principle of Building with Nature®, using methods that at the same time strengthen the economy and improve the environment, while ensuring an optimal use of the available space. Specialist also in the fields of bio-based economy & infrastructure: roads, railways, pipelines and waterways, including Aquapuncture®, aiming at the sustainable use, adaptation and management of inland waterways and their waterfronts for safety, navigability & regional, socio-economic development, while improving environmental values & nature.

Flanders: Climate Proof - Water Safe - Water Prosperity through Building with Nature® & Aquapuncture

Applying the principle of Building with Nature® using more than before the materials present in nature and the forces and interactions to which they are exposed, and the characteristics of coast & seabed, it is possible to transform step by step the narrow coastal strip of Flanders into an attractive, safer dune-beach coast. With regard to the hinterland using the method of Aquapuncture® it is possible to create both Water Safety as well as Water Prosperity.

Ilse Smets, KU Leuven

Ilse Smets is professor at the Chemical Engineering Department of the KU Leuven. Her research concentrates on monitoring, modeling, optimization and control of biological wastewater treatment systems (i.e., classic activated sludge systems as well as membrane bioreactors) with a specific focus on the bioflocculation dynamics of activated sludge. Her passion for these topics is also reflected in several water related courses she teaches and workshops she provides.



Bart De Vos, Goodplanet

Arne Verliefe, UGent

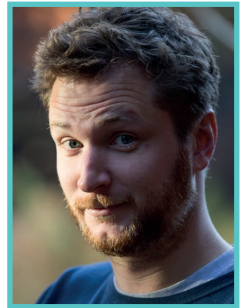
Arne Verliefe is associate professor at Ghent University, Particle and Interfacial Technology group. He has a strong research focus on interfacial phenomena in separation processes, mainly membranes. The applications of his research are primarily within water treatment, mainly in the fields of process water/ultrapure water for industry and improved sanitation for developing countries. Arne has built a strong track record in this field and has good connections with several highly regarded international research partners and with the waste- and process water industry



Water fit-for-use in de chemische industrie: inzet van alternatieve waterbronnen

Maarten Desmet, For Good, TU Delft

Maarten is an architect by education. He did his internship at the Ministry of Works and Human Settlements in Bhutan where he started researching the integrative sustainability approach Gross National Happiness. Maarten published a book on GNH and is now pursuing his PhD at the Technical University of Delft on the same topic. Maarten is the co-founder of For Good, the digital platform that helps people to live more sustainable. He is also co-founder of the office NDVR which focuses on socio-spatial research and consultancy.



For Good - your guide towards a more sustainable lifestyle

Frederik De Laender, UNamur, UGent

Frederik De Laender, PhD, is a member of the Young Academy of the Royal Flemish Academy of Sciences and the Arts from Belgium and is actively collaborating with 15 different research teams across Europe and the United States. Currently, Frederik is supervising a team of 8 PhD students working on



community and ecosystem ecotoxicology using models and microcosm approaches. Frederik has served as invited as an external expert for the European Commission for the Scientific Committee on Health and Environmental Risks (SCHER) and for the USEPA (US) as well. He is Professor of Ecology at UNamur and Guest Professor at UGent.

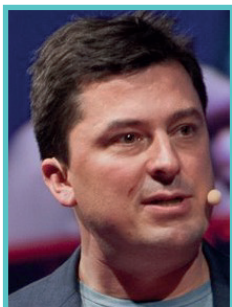
Predictive ecology makes you wise



Samuel Van de Vijver, UAntwerpen

Samuel Van de Vijver studeerde 4 jaar geleden af als ingenieur-architect aan de KU Leuven met een proefschrift over de kwetsbare waterinfrastructuur in Cochabamba, Bolivia. Sinds 2012 werkt hij als projectarchitect voor RE-ST in Antwerpen aan diverse architectuur, stedenbouwkundige en onderzoeks-projecten. In 2015 heeft hij met RE-ST het onderzoek 'De winst van het niet-bouwen' en 'Pleidooi voor het niet-bouwen' afgerond. Sinds 2015 is hij bovendien als stedenbouwkundig onderzoeker verbonden aan de Onderzoeksgroep voor Stadsontwikkeling binnen de Universiteit van Antwerpen. Hij is geboeid door klimaatverandering en de impact hiervan op onze steden en landschappen. In zijn onderzoek focust hij zich meer specifiek op waterschaarste en droogte op ruimtelijk vlak.

From water urbanism to drought urbanism. Designing a resilient urban landscape, addressing drought and water scarcity.



Korneel Rabaey, UGent

Korneel Rabaey is professor at the Center for Microbial Ecology and Technology (CMET), head of the department of Biochemical and Microbial Technology at Ghent University as well as honorary professor at The University of Queensland. He is a member of the Young Academy. His main research efforts are on resource recovery from wastewater, industrial liquid sidestreams and CO₂ streams from industry. Typically a combination of electrochemical and/or bioelectrochemical approaches is used to achieve formation of added value products. He is currently leading several scale-up projects related to organics recovery, fermentation, CO₂ conversion to organics and sanitation in Indian slums. He is the author or co-author of over 120 refereed articles attracting over 15.000 citations in the past ten years, listing him as an ISI Highly Cited Researcher. He is currently associate editor for mSystems and Editorial Advisory Board member for Environmental Science & Technology.

Electrify the water sector

Tom Williams, IWA

Tom Williams coordinates IWA's thematic programmes, which are agendas for change for basins, cities and water supply and sanitation service providers addressing and responding to some of the most significant challenges we face in managing the water cycle. Tom has a background in public health sciences and microbiology and is committed to contributing to social and environmental development. His motivation for joining IWA was to contribute to the effective communication of science, an interest first established whilst working in microbiology laboratories and extended since working at IWA to the role of science in informing practice and policy.



Principles for Water-Wise Cities

Wim Van Gils, Natuurpunt

Wim Van Gils (°1976) has a master degree in biology (KU Leuven, 1999). He worked two years as a researcher on freshwater fish at INBO (www.inbo.be) before joining Bond Beter Leefmilieu (Federation for a Better Environment – www.bblv.be) as water policy officer. From 2002 until 2010, he worked on the implementation of the urban waste water directive, the nitrates directive, the water framework directive and flooding. Next to that, he was involved in large water-related integrated projects such as Seine-Schelde (a part of TEN) and the development of the Scheldt estuary.

Since 2010, he is policy director at Natuurpunt, the biggest nature conservation organization in Flanders. The policy work of Natuurpunt (www.natuurpunt.be/beleid) focuses on biodiversity, spatial planning, agriculture, fisheries, and water policy.

He is a member of the Minaraad (www.minaraad.be) – the multi-stakeholder council that advises the Flemish government on environmental issues.



Nature- based solutions for an urbanized region

Dirk Van der Stede, VITO/Flanders Knowledge Center Water (VLAKWA)

Dirk Van der Stede (1954, Oostende, Belgium) has, since the beginning of his career (1975), been involved in innovation and new technology, including European research and demonstration projects within different framework programmes.

As co-founder/Managing director of HEMMIS (1990), activities were focussed on environmental applications, including water quality modelling applications. A worldwide network has been set-up with university partners, authorities and water users from all over the world.

Dirk Van der Stede managed the start-up of Vlakwa (2010), since January 2016 an independent division of VITO. He is member of a large number of a socio-economic regional, national and international organisations.



To a robust water system with ambitious EU living-labs and inclusive multi-stakeholder governance



Willy Bauwens, VUB

Prof. dr. ir. Willy Bauwens is head of the Department of Hydrology and Hydraulic Engineering at the Faculty of Engineering of the Vrije Universiteit. He is specialized in surface water hydrology and in urban hydrology. He is a member of the Royal Academy of Overseas Sciences and chair of the steering committee of the inter-university international course programme on Water Resources Engineering.

Preparing students for the future water management in the South

Jos Boere, KWR, The Netherlands

Jos Boere leidt de kennisgroep Watersystemen en Technologie, waarin 75 specialisten verspreid over een vijftal onderzoeksteams werken: Geohydrologie, Ecohydrologie, Drinkwaterbehandeling, Waterinfrastructuur en Industrie/Afvalwater/Hergebruik. Verder is Jos plaatsvervangend directeur van KWR, en is hij binnen het MT onder meer verantwoordelijk voor nieuwe markten. Jos heeft een achtergrond in milieutechnologie en management. Eerdere werkervaring ligt op het gebied van advisering rondom waterbehandeling, industriële R&D, normalisatie, training/opleiding en financieel en internationaal business management. Sinds begin 2015 is Jos lid van het bestuur van ALLIED WATERS (www.alliedwaters.com), een publiek-private samenwerking tussen bedrijfsleven en kennisinstututen welke zich richt op het internationaal valoriseren van Nederlandse kennis op het gebied van water.



Water in the Circular Economy

Marnik Vanclooster, Earth and Life Institute, UCL

Prof. Dr. Marnik Vanclooster is professor and researcher at Universit  catholique de Louvain (www.uclouvain.be/marnik.vanclooster). He made his PhD in soil physics and develops research projects in the area of water resources engineering, agricultural water management and vadose zone hydrology. His major research focus is the study of transport processes of water and chemicals from agricultural origin in the soil-water continuum. He has 20 years of experience in executing and leading research projects at the national level, at the EU level and elsewhere (in particular the Maghreb and central Africa). He is head of the Environmental Sciences Department of the Earth and Life Institute of the UCL. He was elected chair of the Vadose Zone Division at the European Geophysical Union (2011-2013), is elected chair of the Belgian commission for the UNESCO – International Hydrologic Program (2013-2016), past member of the editorial board of the 'Journal of Hydrology' and the 'Vadose Zone Journal', and current member of the editorial board of 'Agricultural Water Management' and 'Hydrology and Earth Sciences Systems Journal (HESS)'.



The Belgian Committee of the International Hydrological Programme of UNESCO: a vehicle for promoting Belgian hydrological science in the Global Water Family.

Thomas Van Waeyenberghe, AquaFed

Thomas Van Waeyenberghe is Head of the Brussels Office, AquaFed – The International Federation of Private Water Operators (the global 450+ members trade federation for public-private partnership operating companies). He has expertise in private sector provision of water and sanitation services, right to water and sanitation, gender and water governance issues, international development policy, multistakeholder partnerships and dialogues, relations with donors and multilaterals. Van Waeyenberghe is credited lobbyist to the European Parliament and member of the Multistakeholder Coordination Group, European Union's Water Initiative (EUWI). He is also treasurer and member of the Board of Directors of Building Partnerships for Development in Water and Sanitation (BPDWS) – United Kingdom.



Ann Overmeire, POM West-Vlaanderen

Ann Overmeire is coordinator of Flanders' Maritime Cluster and responsible for maritime economy at the West-Flanders development agency in Belgium. Besides day-to-day management of the cluster organisation, she is responsible for planning and strategy development, co-ordination with various stakeholders and project development. Before this, Ann was 8 years innovation co-ordinator at the West-Flanders development agency. The main topics she worked on are energy efficiency, renewable energy, marine / maritime economy and care economy. She has a background in chemical engineering. Her previous experience is with sustainable business cooperation, environmental, health and safety auditing and soil and groundwater remediation.



Regional economic opportunities associated with climate adaptation

Jan Seys, VLIZ Flanders Marine Institute

Head of the Communications Department of VLIZ (Flanders Marine Institute - Belgium), chair of the European Marine Board Communications Panel since 2010 and member of the news & information group of POGO (Partnership on Observation of the Global Ocean). Trained as a marine biologist – with a PhD in seabird research - and initially active in marine and estuarine research in Belgium/Netherlands (10 years) and as a managing-director (2 years) of a bilateral Kenya-Belgium cooperation in marine sciences. Educational experience as a teacher, tourist guide and developer of learning platforms. As head of communications at VLIZ, he developed a wide-ranging expertise in communicating scientific information to policy-makers, researchers, schools and the public at large. One of the pioneers of the Ocean Literacy movement in Europe and co-organizer of the First Conference on Ocean Literacy in Europe (12 Oct 2012, Bruges).



Flanders Wise With Seawater?



Marc Despiegelaere, Protos

After a career of 30 years in the private sector, of which 24 very enjoying years in the water sector, Marc Despiegelaere made a long planned shift, and joined in 2005 the non profit landscape. Protos was the perfect match, since water is also the focus in the third world development programmes of Protos.

Marc is convinced that there must be more "cross-fertilising" between the profit and the non-profit sector. This is very enriching for both kind of societal players, and not at least for the private sector and civil society organisations.

Flanders way forward to climate adaptation support for Least Developed Countries



Maaïke Breugelmans, City of Ghent

Master in Bioscience Engineering (Soil and Water Management).

Working for the City of Ghent since 2005 as policy maker on Climate Adaptation, Environment and Climate Service.

Policy maker, first for sustainable development (waste management, food consumption, water management), since 2012 for climate.

Towards a Climate Resilient City

The animation at <https://klimaat.stad.gent/nl/gent-bereidt-zich-voor-op-onvermijdelijke-klimaatverandering> shows the way to a climate resilient Ghent.



Rudy Gotzen, Boerenbond, KU Leuven

Rudy Gotzen Barrister at the Louvain Bar (1975-1979); Legal Counsel of various Belgian ministers (agriculture, environment, nature and forestry, urban planning) (1982-1999); Legal counsel of the Boerenbond (Belgian farmers association); Teaching "Land, nature and forestry policy" at the Department of Earth and Environmental Sciences, KU Leuven; Vice-President of the Vlaamse Landmaatschappij.

Farmers and sustainable water management



Jeroen Buysse, UGent

Jeroen Buysse has a master degree in bioscience engineering and made a PhD on economic modelling to assess agricultural policies.

His current research deals with agricultural and environmental policy analysis with a focus on the economics and regulatory frameworks of reactive nitrogen pollution.

This research uses economic models to compare the policy impact of mineral nitrogen taxes, fertilization standards and manure transport regulations and their impact on surface water quality.

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Ingmar Nopens, UGent

Prof. Ingmar Nopens holds a MSc in Bio-science Engineering and a PhD in Applied Biological Sciences from Ghent University. He is associate Professor since 2008, leading the BIOMATH research group at Ghent University. His main interest lies in Mathematical modeling using different frameworks like biokinetics, computational fluid dynamics and population balance models and combinations thereof. These are applied to unit processes as well as plant- and system-wide with a goal building system understanding and eventually optimization. He is an IWA fellow since 2011 and is prominent in different IWA structures (Specialist Groups: Modelling and Integrated Assessment (MIA); Task Group Modelling of Greenhouse Gas Emissions from wastewater systems; Working Group: Computational Fluid Dynamics for wastewater system applications). He was the chair of the scientific committee of the Wastewater treatment Modelling seminar recently held in Spa, Belgium in spring 2014. He is the incoming chair of the UGent Center of Environmental Science & Technology as well as the Belgian IWA branch (B-IWA).



Jean Berlamont, KU Leuven

Jean Berlamont is emeritus professor of hydraulics and hydraulic engineering at KU Leuven. He is a past head of the department of civil engineering and past dean of the faculty of engineering.

J. Berlamont is chairman of VLARIO and member of the board of the Flemish Marine Institute (VLIZ). His research focused on hydraulic structures, cohesive sediments and urban drainage systems.



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Patrick Meire, UGent

Patrick Meire studied biology at Ghent University where he also obtained his PhD. Since 1995 he holds the chair of Integrated Water Management at the Institute of Environmental Studies of the University of Antwerp. From 1999 onwards he is full professor and head of the Ecosystem Management Research group (ECOBIE) at the University of Antwerp and visiting professor at the Warchau University of Life Sciences. His research interests are mainly integrated water management, estuarine and aquatic ecology and biogeochemistry.



[Jeroen Buysse \(see above\)](#)

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Luuk Boelens, UGent

Luuk Boelens worked several years for the Dutch Province of South Holland as project leader for large projects, and from 1998-2002 as a senior project-leader for large infrastructure projects (such as the High Speed Train lines) on behalf of the Dutch consultancy firm Holland Railconsult (at the moment Movares). From 2004-2012 he was extraordinary professor in Network planning, Governance and Space at the University of Utrecht on behalf of the ministry of VROM, and since 2012 full professor of Spatial Planning and director of the Centre for Mobility and Spatial Planning at the University of Ghent.

Luuk Boelens is opinion leader and author of various books and articles regarding the actor relational approach of (urban) planning, governance and design. He has been member of several major juries on spatial planning. He chairs academic review boards for VLIR/VLOHRA, the Think-tank Climate Adaptation for Belgium and the Network of sustainable mobility research. He is Belgian representative of the Association of European Planners, member of the Head of Schools, and has organised AESOP's year congress for 2014 in Utrecht. His recent research focuses on the institutional rearrangements, co-evolution in decision-making and adaptive governance in especially the Euro delta of Rhine, Meuse and Scheldt, based on actor-network theories, post structural geographies and common pool resource management.

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Jan Peumans, President Vlaams Parlement, President Vlaamse Klimaatcommissie

Jan Peumans is Licentiaat in de politieke en sociale wetenschappen, KU Leuven en studeerde nadien aldaar aan het Instituut voor Ontwikkelingslanden.

Van 1976 tot 1988 was Peumans Coördinator preventie en voorlichting aan de RIAGG Westelijke Mijnstreek (Nl.). Hij was o.m. Adjunct-kabinetschef van de Vlaams minister van Openbare Werken van 1988 tot 1991, directeur marketing en strategie bij De Lijn van 1991 tot 2004 en was Fractie leider in de Limburgse Provincieraad (1985-1987 en 1991-2004). Sinds 2004 is hij Vlaams Volksvertegenwoordiger en sinds 13 juli 2009 Voorzitter van het Vlaams Parlement.

Daarnaast was hij Burgemeester van Riemst van 1995 tot 2006 en Schepen van Riemst (1983-1994 en opnieuw sinds 2007).



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