LET'S TALK RESILIENCE!

AUSTRALIA - NETHERLANDS WATER CHALLENGE 2015

PROUDLY SUPPORTED BY

Royal HaskoningDHV Enhancing Society Together · Van Oord Marine ingenuity · Kingdom of the Netherlands · Deltares Enabling Delta Life · HydroLogic · TU Delft Delft University of Technology

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JOIN AND BE INVITED FOR A TRAINEESHIP IN AUSTRALIA AND THE NETHERLANDS

SUBMISSION DEADLINE 22 APRIL 2015 WWW.HOLLANDWATERCHALLENGE.NL/AUSTRALIA

The Highlights

2 TEAMS will be invited for a unique traineeship in Australia and the Netherlands**

Present your ideas to make Australia more climate resilient at the National Floodplain Management Conference in Brisbane**

Join young professionals from around the world at the International Water Week 2015 in Amsterdam**

Work on your project supported by a team of leading EXPERTS from industry, government and academia

** All cost of flights and accommodation are paid-for

Phase 1

Submit your idea/concept to make Australia more climate resilient

Deadline: 22 April 2015

Phase 2

4 Teams will be selected to present their idea at the Floodplain Management National Conference

19-22 May 2015, Brisbane

Phase 3

2 Teams will be selected to do a project/traineeship in Australia and the Netherlands.

Program Netherlands: 17 October–7 November 2015

"Being part of the Australia-Netherlands Water Challenge has been an illuminating and fun experience. We've had the chance to work with the foremost experts in the industry and were really impressed by the quality of the other finalists."

Paul Munro, Dan Peade & Damian Meoli, RMIT/University of Melbourne, Winners 2013

"When asked if I'd like to develop my idea **- of course I** *said "YES!". I'd never been to Europe, or worked with* **smartphone applications, or worked with a Dutch company – I was terrified! Fortunately, everyone was very welcoming. I was amazed at the effort they put** *into making me feel welcome"*

Kevin Loh, University of Queensland, Winner 2012

Board of Recommendation

The relationship between Australia and the Netherlands goes back hundreds of years. Today, we may well be facing our biggest challenge yet as our nations are faced with the impact of climate change. Working together, across borders is critical. Combining our knowledge and experience provides Australia and the Netherlands a unique position to lead this challenge - both to the benefit of our own nations as well as those countries around the world that depend on our support.

Engaging the next generation is key to our approach: this is about their future. I strongly encourage students and young professionals to become part of our partnership and contribute their ideas through the Australia-Netherlands Water Challenge.

I wish you much success and I look forward to welcoming you to the Netherlands in October!

Mr. Hans Huis in 't Veld, Chairman National Topsector Water, the Netherlands

H E Mr. Neil Mules, Ambassador
Australian Embassy in the Netherlands

H E Mrs. Annemieke Ruigrok, Ambassador
Netherlands Embassy in Australia

Mr. Lloyd Taylor, Executive Director Operations Support - Service Delivery
Queensland Department of Natural Resources and Mines, Australia

Mr. Ian Dinham, Chairman
Floodplain Management Association, Australia

Mr Mark Pascoe, CEO
International WaterCentre, Australia

Mrs. Elaine Alwayn, Director Water & Soil
Ministry of Infrastructure & the Environment, the Netherlands

Introduction

I. Next Generation of Water Leaders

As the urgency and complexity of water and other climate-related problems is increasing dramatically, the world needs inspired and capable professionals with a passion for water – engineers, policy makers, entrepreneurs, politicians, consultants, etc. It is particularly important to engage young people, who are still in a position to make important choices with regards to their education and career. The Dutch water sector considers it a key responsibility to take an active role in engaging young people with water, both in the Netherlands and internationally, and inspire them to become actively involved.

II. Holland Water Challenge

It is against this background that the Holland Water Challenge was launched in 2010. Based on a competition format, the Holland Water Challenge invites graduate students and young professionals to investigate key water problems in their own country and cooperate with professionals experts to develop their own ideas and solutions. Participants are given the opportunity to present their ideas during a prominent event, e.g. an international conference or business forum. The best ideas are recognised with an award.

Since 2010 many editions of the Holland Water Challenge have been organised, involving more than 200 students and young professionals from more than 30 universities across 15 countries.

Previous editions of the Holland Water Challenge 2010-2014

Every edition of the Holland Water Challenge is supported by a group of Dutch organisations, representing the private sector, knowledge institutes and government. Organisations that have participated include Van Oord, Royal HaskoningDHV, Deltares, HydroLogic, Fugro, TU Delft, Boskalis, Evides, BAM International, Norit, UNESCO-IHE, Rabobank, Ministry of Infrastructure & Environment, Ministry of Foreign Affairs, Singapore-Delft Water Alliance, KLM Royal Dutch Airlines and the Netherlands Water Partnership.

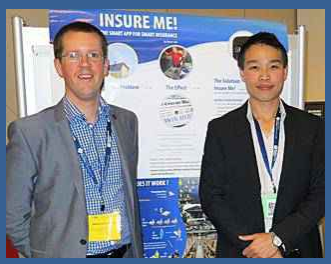
Australia-Netherlands Water Challenge

I. Australia and the Netherlands Cooperating on Water

Australia and the Netherlands share a special relationship with water. Over many years, both countries have developed extensive expertise and experience in a broad range of fields such as flood management, water conservation, marine infrastructure, water policy & planning and aquatic ecosystems.

In recent years, faced by a number of serious floods and droughts, climate adaptation and resilience have risen to the top of the agenda of researchers, practitioners and policy makers in both countries. Recognising their mutual strengths in water management, Australia and the Netherlands aim to learn and benefit from each other's experiences by combining and exchanging expertise, capacities and knowledge.

In this context, a group of organisations with extensive water management expertise - from industry, government and academia - have joined forces to engage and inspire younger generations to become actively involved in this cooperative effort, resulting in the Australia-Netherlands Water Challenge program.



"The water sector needs talent and I'm passionate about developing it. The opportunity to be involved in two editions of the Australia-Netherlands Water Challenge in 2012 and 2013 *and work with some of Australia's finest students was thoroughly inspiring and enjoyable.* The challenge provides a unique platform for students to express themselves, interact with *professionals and make a real difference for their country!"*

- Paul Hart, Principal Flood and Water Management Consultant, Royal HaskoningDHV
(picture left with 2012 winner Kevin Loh)

II. Australia-Netherlands Water Challenge

Two editions of the Australia-Netherlands Water Challenge have been held in previous years with 34 teams from 7 universities across Australia participating.

A unique element of the competition is the assignment of expert mentors to the selected teams – giving participants a great opportunity to interact directly with professionals.

Have a look at our Facebook page for an impression of the programs in 2012 and 2013! http://www.facebook.com/hollandwaterchallenge.

III. Format of the Challenge

After the initial application phase, four (4) teams of two students/young professionals each will be selected. These teams will be working with their assigned mentors to prepare their presentations at the Floodplain Management Association National Conference in Brisbane (19-22 May 2015).

At the conference, an independent team of experts from Australia and the Netherlands will be judging the presentations and select **TWO WINNING TEAMS** for a traineeship.

IV. The Traineeship

The two winning teams will be invited for a unique traineeship, doing an exciting project assignment in both Australia and the Netherlands. The projects will be defined by the joint partners from Australia and the Netherlands and will be closely aligned with the areas of cooperation between both countries in the area of climate resilience - but also take into account the interests, capabilities and ambitions of your team. The teams will work under the guidance of a team of experts from across private sector, academia and government. The projects are expected to be executed in two stages:

Stage 1

The teams will start the traineeship in Australia: creating a project plan, doing desk and field research and preparing their program in the Netherlands. We expect the teams to spend approximately 15-20 days during this first phase – to be planned over the period June – October 2015, i.e. the 15-20 days may be divided over this period to fit your other commitments (study, work). The teams will mostly work from their own homes/campus.

Stage 2

The teams will spend 3 weeks in the Netherlands. **These dates are fixed: 17 October – 7 November 2015.** The first two weeks, the teams will execute the program that has been prepared in phase 1, including company visits, meetings with experts, universities, etc. In addition, there will be time for field trips to some of the famous water works in the Netherlands as well as social events with Dutch students.

The last week, the teams will join other young professionals from around the world for the International Water Week 2015 in Amsterdam (http://www.internationalwaterweek.com).

Timeline & Planning

PHASE 1: APPLICATION SUBMISSION

Feb-March 2015

An extensive promotion campaign will be launched across Australia. On-campus presentations will be held at various universities - check the website for the scheduled presentations.

22 April 2015

Deadline to submit your entry - see requirements under HOW TO PARTICIPATE (page 12).

1 May 2015

An Expert Committee with representatives from Australia and the Netherlands will select and announce 4 teams to join phase 2.

PHASE 2: FINAL PRESENTATIONS

4 – 18 May 2015

The 4 selected teams will prepare their presentations for the Floodplain Management Association National Conference in Brisbane (19-22 May). Teams will have their own private workspace on our online BlueSpring platform where they have direct, personal access to our team of experts for support and advice.

19-22 May 2015

Presentation by the selected teams and announcement of the winners of the traineeship during the Floodplain Management Association National Conference. All teams will receive:

- A domestic return flight to Brisbane for both team members;
- Two nights' accommodation in Brisbane (shared room);
- Day-registration for the conference.
- Group dinner with all participating companies/organisations.

PHASE 3: TRAINEESHIP

June-Nov 2015

The two winning teams will be doing an exciting traineeship under the guidance of a team of Australian and Dutch experts - see details on page 7.

The teams will be spending 3 weeks in the Netherlands from 17 October until 7 November 2015. Important: these dates are fixed!

Let's Talk Resilience!

One area in which Australia and the Netherlands are interested to work together is strengthening the resilience of their countries in the face of climate extremes. We believe there is a great opportunity to learn from each other's experiences given the similarities and differences between both countries.

I. What is Resilience?

Few concepts have been more enthusiastically embraced in recent years than resilience. This is hardly surprising in a world that has become a rather uncertain and risky place to live. The ability of governments and organisations to prevent and anticipate adverse events - through policies, legislation, infrastructure, etc. – is certain not to be sufficient to keep people out of trouble at all times. Hence, the ability of people and institutions themselves to withstand and recover from adverse events - is a very attractive and powerful notion.

See infographic on Resilience by The Rockefeller Foundation on the next page.

RESILIENCE

...the ability of individuals, communities, businesses and government institutions to withstand and recover from adverse events and to emerge stronger than before...

It is important to note the last part of the definition which emphasizes the capacity to renew and develop and to utilize disturbances as opportunities for innovation and evolution.

Notwithstanding the promise resilience holds, there is no easy recipe to building resilience. To the contrary, building resilience is a complex, dynamic, continuous, never-ending process of learning and doing across individuals, communities, government institutions, corporations, states and nations.

Through this challenge we are inviting new, innovative, original ideas that can make a real contribution to strengthening resilience in Australia and the Netherlands.

"Resilience is not simply the result of adding up resilient individuals. The uncertain nature of climate impacts means that no one individual or institution can possibly prepare for or recover from all of the potential scenarios. Therefore, resilient systems are required. Systems are combinations of resources, institutions, individuals, and processes that combine to accomplish a set of specific functions. To achieve resilience, systems build redundancies of resources, multiple response paths, and safety nets. Resilient systems survive a greater range of situations and for extreme or *unexpected impacts fail gracefully, giving time to recover key functions."*

From: Rockefeller Foundation White Paper, Building Climate Change Resilience

THE RESILIENCE DIVIDEND

Today, humanity faces unprecedented risk

Urban populations have never faced so many shocks and stressors. Without strategic investment, cities struggle to adapt, respond and recover from disaster.

Investment limits disaster | Investment spurs new growth

RESIDENTS	BUSINESSES & INSTITUTIONS	GOVERNMENTS
Lives saved	Restore operations	More effective disaster aid
Greater mobility and access	Lower operating risk	Increased private investment
More job opportunities	New markets for innovation and technology	Greater protection for the vulnerable

II. Resilience in Australia and the Netherlands

For good reasons, Australia and the Netherlands have been responding to climate extremes – floods and droughts – in very different ways: Australia has been more focused on preparedness and recovery while the Netherlands has focused more on protection (keeping disaster out). While both approaches have been successful, there is a realisation on both sides that it is (will) not be enough. Across all (new) measures that are being planned in both countries, there is one common theme between them: making their nations more resilient.

The Netherlands: towards a risk-based strategy

For a long time, the Netherlands relied on infrastructure, such a dikes, polders and levees, to protect the country from flooding. Although this approach has been working well, it has also become clear that an approach completely based on "keeping the water out" is not going to be sustainable over time. More dynamic and adaptive concepts have been introduced, such as Building with Nature and Room for the River, which aim to find a better balance between controlling the forces of nature and letting nature run its course – and even letting nature work to our advantage.

In 2014, the Netherlands took another big step, introducing a risk-based national water strategy that identifies three safety layers:
Layer 1: preventive measures to limit the probability of a flood
Layer 2: spatial planning to limit the consequences of any flood
Layer 3: disaster and crisis management to respond effectively to any flood.

For the first time, the national strategy directly and indirectly calls for resilience. This is most explicit in level 3 which focuses on disaster preparedness and response but it is also embedded in level 2 that drives processes related to spatial planning that have an important role (potentially) in strengthening resilience, e.g. through consultative processes that involve local communities with the design of (part of) their own living environment. See http://www.ruimtelijkeadaptatie.nl/en/

III. Resilience of the Social, Built, Natural & Economic Environment

For the purpose of this challenge - and considering that we are specifically looking at resilience as it relates to dealing with climate extremes - we will look at solutions to strengthen resilience across four environments:

1. **Social environment**: resilience of individuals, families, communities.
2. **Built environment**: resilience of buildings and infrastructure (roads, water supply, etc.)
3. **Natural environment**: resilience of coasts, rivers, catchments, wetlands, etc.
4. **Economic environment**: resilience of businesses and other economic infrastructure.

These environments are overlapping and highly interdependent. Investments in one environment often impact resilience in other environments.

HOW TO PARTICIPATE?

Step 1

Come up with a specific idea/concept that you believe can build and strengthen climate resilience in Australia and/or the Netherlands. You are free to focus your idea/concept on any of the four resilience environments:

Social Your idea/concept could relate to community awareness, community engagement, (risk) communication, multi-stakeholder cooperation, education, disaster preparedness, volunteering, information gathering and sharing, use of social media, etc.

Built Your idea/concept could relate to the use and design of houses, roads, pavements, parks, sewage systems, squares, hospitals, ports, offices, gardens, public transport, etc.

Natural Your idea/concept could relate to any element of the natural environment such as rivers, coasts, wetlands, lakes, bushlands, etc.

Economic Your idea/concept could relate to businesses, insurance, supply/logistics, money/banking, etc.

Important: you are free to choose the format of your submission that best communicates your idea, e.g. a paper, website, Facebook page, smartphone app, infographic, poster, design drawing, video, public campaign, documentary, etc.

Step 2

Check your schedule for the period June – November 2015 to make sure you can COMMIT to the traineeship – if selected as one of the winning teams!

The preparation phase in Australia between June and October 2015 is expected to take you approx. 15-20 days. You can plan these days between June and October to fit your other (study or work) commitments. The program in the Netherlands is to take place for 3 weeks between 17 October and 7 November 2015 (these dates are fixed!) – all team members are required to participate. If in any doubt about this requirement, please contact us!

Step 3

Form your team. Your team should consist of 2 MEMBERS - no more, no less!

Both team members should currently be studying at a university in Australia (Bachelors, Masters or PhD) or working with a company or organisation in Australia for less than 3 years. Participation is open to all nationalities. Teams are allowed to consist of students and/or young professionals, studying and/or working at the same or different universities/organisations, from the same or different (academic) disciplines, etc.

Step 4

Both team members should create a personal profile on our BlueSpring competition platform. Go to www.mybluespring.com and select REGISTER from the menu. Follow the registration steps to create your profile, log-in and join the Australia-Netherlands Water Challenge 2015 group. All further communications about the program will be posted in this group (the registration itself does not yet commit you to submit an application).

Step 5

Prepare your submission consisting of:

1. Your idea/concept (Step 1)

2. A complete profile on BlueSpring (see Step 4).

3. Completed Entry Form, which you can download in the challenge group on BlueSpring.

Your submission will be judged on (1) the extent to which you give evidence of really understanding the concept of resilience and (2) the extent to which your idea/concept is original, offers substantial potential value-add and is well-presented.

Step 6

Submit your entry no later than 22 April 2015 through our BlueSpring competition platform (see Step 4 above).

BlueSpring

BlueSpring is the online registration and competition platform, allowing participating students and professional experts to exchange information throughout the competition – and to keep in touch afterwards!
www.mybluespring.com

CONTACT US

Please do not hesitate to contact us if you have any questions.
We recommend you post your questions in the Australia-Netherlands Water Challenge group on BlueSpring (see under Step 4 above) so that information can be shared with all participants.

If you have a more personal question, please email to Gregor van Essen, gregor@hollandwaterchallenge.nl

Appendix 1 – Participating Partners

Kingdom of the Netherlands

The Dutch government has long been a strong supporter of international cooperation and sharing of expertise and experience in water management. The Dutch government is actively supporting the water agenda through the concerted efforts of the Ministry of Infrastructure & Environment, Ministry of Foreign Affairs and Ministry of Economic Affairs, Agriculture and Innovation.

In Australia, the Dutch Embassy in Canberra and Consulate General in Sydney play a key role in bringing together parties from the Dutch and Australian water sectors and support them to identify mutual opportunities.

Website: australia.nlembassy.org/

Van Oord
Marine ingenuity

Van Oord is a leading international company specialising in dredging, marine engineering and offshore projects (oil, gas and wind). With more than 5,000 staff across 40 branch offices worldwide, Van Oord is an innovative partner for its clients and has been helping to create the infrastructure for the world of tomorrow. Van Oord is a founding member of Building with Nature and actively involved with the Room for the River program in the Netherlands.

In Australia, Van Oord has offices in Perth and Brisbane.
Website: www.vanoord.com

Royal HaskoningDHV
Enhancing Society Together

Royal HaskoningDHV is a leading independent, international project management and engineering consultancy service provider. Specialising in planning and transport, infrastructure, water, maritime, aviation, industry, energy, mining and buildings, the company employs 8,000 staff in more than 35 countries. Royal HaskoningDHV is a prominent member of the Dutch water sector, involved in numerous national and international initiatives, such as the Brisbane River Flood Study Stage 1, Mekong Delta Plan, New Orleans Levee System, Building with Nature and others.

Royal HaskoningDHV Australia has offices in Sydney and Brisbane.
Website: www.royalhaskoningdhv.com

Deltares is an independent, institute for applied research in the field of water, subsurface and infrastructure. Throughout the world, we work on smart solutions, innovations and applications for people, environment and society. Our main focus is on deltas, coastal regions and river basins. Managing these densely populated and vulnerable areas is complex, which is why we work closely with governments, businesses, other research institutes and universities at home and abroad.

Deltares' office in Australia is based in Brisbane.
Website: www.deltares.com

HydroLogic

At HydroLogic we have a great interest in water and climate issues. We are a team of hydrologists and ICT experts who believes that advanced ICT technologies play a major role in solving the world's most urgent water problems resulting from urbanisation and climate change. HydroLogic is the developer of the price winning HydroNET portal where over 20 Dutch and Australian partners work together to provide the best available online information and dashboards and to develop smart applications such as flood or drought early warning systems. These applications currently support over 700 Dutch and Australian professionals in the water and environmental sectors.

Websites: www.hydrologic.com and www.hydronet.com

UNESCO-IHE Institute for Water Education

UNESCO-IHE is the largest international postgraduate water education facility in the world, having provided postgraduate education to more than 14,500 water professionals from over 160 countries. UNESCO-IHE carries out educational, research and capacity development activities that complement and reinforce each other in the broad fields of water engineering, water management, environment, sanitation, and governance.

Website: www.unesco-ihe.org

INTERNATIONAL WATERCENTRE

The International Water Centre (IWC) provides education and training, applied research and expert services to promote a whole-of-water cycle approach and develop capacity in integrated water management around the world. A joint venture of four leading Australian universities with national and international knowledge networks, the IWC provides a breadth of expertise and experience rarely found in a single organisation. Its education programs, such as the Master of Integrated Water Management, draw students from all around the world.

Website: www.watercentre.org

Fugro is a global service provider, employing more than 14,000 staff in 60 countries, supporting the exploration, development, production and transportation of the world's natural resources. Fugro has a global network of water experts who have a broad experience in data acquisition methods and techniques, data processing, modelling and consultancy with respect to water defence and flood control, water resources management and urban water infrastructure.

Fugro has been active in Australia for a long time with offices throughout the country.
Website: www.fugro.com

Dutchdam aims to limit the effects of climate change, and flooding in particular. Dutchdam is able to supply several hydraulic engineering techniques which contributes to the safety of the population and the environment in a responsible way. Dutchdam offers widely applicable systems for emergency flood defences. The various models of the Dutchdam can be deployed as emergency flood defences in coastal defences, in urban situations, in and around buildings, or as emergency sealing for the entrances to buildings at or below ground level.

Website: www.dutchdam.com

The Netherlands Water Partnership (NWP) is a comprehensive network that unites Dutch water expertise. The partnership, consisting of 200 members from private companies, government, knowledge institutes and NGOs, acts as a centre of information on water expertise, policy developments and market opportunities.

Website: www.nwp.nl

Witteveen+Bos is a company based in the Netherlands that provides consultancy and engineering services in the fields of infrastructure, water, the environment, spatial development and construction. Our multidisciplinary approach to projects is the distinctive feature of the way we work. Our clients are governmental, commercial and industrial organisations, including various types of joint ventures and public-private partnerships. We serve our clients from six offices in the Netherlands and ten international offices.

Website: www.witteveenbos.com

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