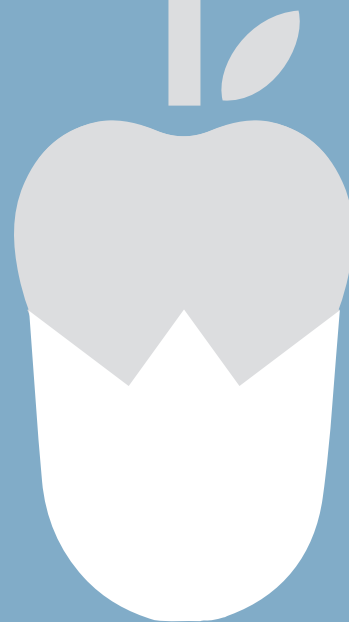


H₂O9 FORUM

WATER CHALLENGES FOR COASTAL CITIES
FROM THE DUTCH DELTA TO NEW YORK HARBOR

SEPT09-SEPT10 ²⁰¹³ NEW YORK & NEW JERSEY



PRESENTING PARTNERS



Metropolitan Waterfront Alliance



CURE. The Center for
Urban Real Estate

MANY THANKS to the H209 Staff and Advisors

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Evelyn Ellis
Rosa Ronsdorf

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DESIGN

Fatema Al Zeera, CURE.

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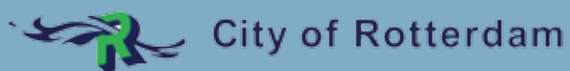


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WELCOME BY HENRY HUDSON 500 FOUNDATION

A VERY GOOD HARBOUR FOR ALL WINDS | 09.09.13

Dear H209 Delegates,

When Henry Hudson entered New York Harbor, exactly four hundred and four years ago this week, his first mate wrote in the Half Moon log the first lines ever written about the city that would become the capital of the world:

September 11, 1609: Then we anchored and saw it was a very good harbour for all winds, and rode all night.

Amsterdam, Rotterdam and New York are defined by their locations on navigational waters, and these waters have been crucial to their growth. In the 17th century water was synonymous with exploration that forged valuable commercial and cultural ties around the world. Today water plays many roles in our lives: it is a friend as well as a threat. Responsible urban development and the ability to live with climate variability play a pivotal role in helping societies protect themselves on one hand, and flourish on the other by taking advantage of new opportunities. For the years ahead, building on existing expertise, incorporating innovations, and raising public awareness are essential to progress. We must reaffirm the crucial role water plays and how important improved infrastructure is to the preservation of our water systems and our safety.

Four hundred and four years ago, as he sailed for five months across the ocean, Henry Hudson was indeed a water pioneer. Let us carry on his spirit of discovery by becoming water pioneers of the 21st century, as you join us for two inspiring days when you will hear about the challenges and opportunities the water offers us in the years ahead. All hands on deck as we embark with the best and the brightest water experts from both legs of Hudson's legendary voyage!

On behalf of our partners, Metropolitan Waterfront Alliance, Regional Plan Association, Netherlands Water Partnership, and Columbia University's Center for Urban Real Estate, we thank you for your support on this vital journey.



GERT TETTEROO

Executive Director of Henry Hudson 500



PATRICK POELMANN

Chairman of Henry Hudson 500

WELCOME BY HONORARY CHAIRS

Dear Friends,

It is both a pleasure and a privilege to serve as Honorary Chairs of this second H209 Forum. In the four years since this conference first took place, we have seen the challenges facing coastal cities continue to grow, from rising sea levels to increasing urbanization to our changing climate. More than ever, we need to work together to help our cities address these challenges with vision, innovation and a focus on resilience. In doing so, we will decrease the risks for urban and coastal areas and shape safer, more livable and amenity-rich communities.

Already, a lot of good work is being done to meet these goals. For example, last month, President Obama's Hurricane Sandy Rebuilding Task Force released the Hurricane Sandy Rebuilding Strategy. It provided communities, of all shapes and sizes, with recommendations on how they can adapt to emerging challenges and connect their comprehensive, long-term planning with near-term, regionally coordinated projects and investments.

Important work is also occurring in the Netherlands. Next week, the third Delta Program will be presented to protect communities from flooding and ensure supplies of freshwater are available, now and in the future. The plan has the potential to advance issues in important areas ranging from urban planning to nature and recreation.

At the H209 Forum, we are thrilled that our two countries have gathered in one place to build on this progress - a testament to the strength of the U.S. - Netherlands partnership. Over the course of this conference, experts from a variety of fields will exchange ideas and perspectives about pressing issues relating to climate mitigation and adaptation. We will learn from each other, develop new solutions to old problems and gain insight that will force all of us to think outside the box. And through it all, we will work in concert towards a common goal: building stronger communities and a more secure future.

In short, this event represents an important opportunity to advance our shared interests. We thank the Henry Hudson 500 Foundation, the New York Regional Plan Association, the Metropolitan Waterfront Alliance, the Netherlands Water Partnership and Columbia University's Center for Urban Real Estate for their great support of this important conference. And we trust that the coastal city challenges in the New York and New Jersey region, in the Netherlands and elsewhere in the world will be more manageable and less intractable because of the collaboration fostered by the H209 Forum.

Please accept our best wishes for a productive and enjoyable conference.



SHAUN DONOVAN

Secretary, U.S. Department of Housing and Urban Development

MELANIE H. SCHULTZ VAN HAEGEN

Minister, Ministry of Infrastructure and the Environment

PROGRAM DAY ONE

MUSEUM OF JEWISH HERITAGE | NEW YORK | 09.09

MODERATORS: **TRACY METZ**, writer and journalist and **ADAM FREED**, Director of The Nature Conservancy's Securing Water Program

- 07:30am-08:30am LOBBY, FIRST FLOOR
Registration and Breakfast
- 08:30am-09:15am AUDITORIUM, FIRST FLOOR
Opening speeches by honorary chairs
MELANIE SCHULTZ VAN HAEGEN, Dutch Minister of Infrastructure and the Environment
SHAUN DONOVAN, US Secretary of Housing and Urban Development
- 09:15am-09:30am AUDITORIUM, FIRST FLOOR
Newsflash on the federal Hurricane Sandy Rebuilding Task Force that published its report in August.
HENK OVINK, Hurricane Sandy Rebuilding Task Force/HUD, Dutch Ministry of Infrastructure and the Environment
- 09:30am-10:30am AUDITORIUM, FIRST FLOOR
Strategy Session One: *"How to Keep Downtown Manhattan Safe and Resilient"* by **TEAM DOWNTOWN**. For a few months before the conference, three American-Dutch Strategy Teams of 6 to 8 experts have collaborated on how to protect three areas of New York and New Jersey from future storms: 1) Downtown Manhattan, 2) Jamaica Bay and 3) Jersey Shore. In this session, an American-Dutch team presents its synthesis, combining the best knowledge, solutions and experience from both sides of the Atlantic, on how to protect South Street Seaport and downtown Manhattan. The teams will share with delegates what "tools" they have in their kits.
ZACK SMITH, Member of the Executive Board of Arcadis, will deliver keynote remarks.
- 10:30am-11:00am EVENT HALL, SECOND FLOOR
Coffee Break
- 11:00am-11:30am AUDITORIUM, FIRST FLOOR
Newsflash on the PlaNYC *"A Stronger, More Resilient New York"* report with:
DANIEL ZARRILLI, New York City's Director of Resiliency.
ROLAND LEWIS, President and CEO of MWA, reflects on the five-point strategy for a resilient waterfront.
- 11:30am-12:30pm LOBBY, FIRST FLOOR
Strategy Session Two: *"How to Keep the Jamaica Bay Area Safe and Resilient"* by **TEAM JAMAICA BAY**.
DAVID WAGGONER, principal of Waggoner and Ball Architects, comments on the presented solutions and explores opportunities for a Jamaica Bay water strategy.
CARTER STRICKLAND, Commissioner of NY City DEP, reflects on the state of the Bay.

PROGRAM DAY ONE

12:30pm-02:00pm	EVENT HALL, SECOND FLOOR Lunch
02:00pm-02:30pm	AUDITORIUM, FIRST FLOOR Newsflash on the New Jersey State, US Army Corps of Engineers, and New York State plans to prevent Sandy-type devastation. DAVID B. ROSENBLATT , Administrator, Office of Engineering and Construction, State of New Jersey JOE VIETRI , Director, National Planning Center Coastal & Storm Risk Management, US Army Corps of Engineers VENETIA LANNON , DEC Regional Director, New York State
02:30pm-03:00pm	AUDITORIUM, FIRST FLOOR Strategy Session Three: <i>"How to Keep the Jersey Shore Safe and Resilient"</i> by TEAM JERSEY SHORE .
03:00pm-03:30pm	EVENT HALL, SECOND FLOOR Tea
03:30pm-04:45pm	AUDITORIUM, FIRST FLOOR <i>"Sweet & Salt"</i> investigates the influence of water on four regional cultures, and highlights the water management styles of New York, Louisiana, the Netherlands, and Vietnam. Historically these regions have established long-standing practices and behaviors surrounding changes in water conditions. Efforts to manage water in times of disaster have rendered unique approaches and responses that have come to shape the cultural values of each region. Some regions developed robust and hard infrastructure to counter the destructive nature of water, while other regions have mastered ways to live with and accommodate water in order to achieve common benefits. Panelists familiar with each region lead a discussion on prevailing cultural beliefs and ideas about water and how these beliefs and ideas are manifested within each culture. Louisiana: GARRET GRAVES , Chair of the Coastal Protection and Restoration Authority of Louisiana Vietnam: PHILIP GIANG , Senior Associate, Perkins Eastman New York: SAM ROBERTS , writer and journalist The Netherlands: PIET DIRCKE , Professor of Urban Water Management, Rotterdam University of Applied Sciences, Arcadis
04:45pm-05:15pm	AUDITORIUM, FIRST FLOOR Wrap-up and Send-off by the two moderators
05:15pm-06:15pm	EVENT HALL, SECOND FLOOR Cocktails and Snacks

During the course of the day, trans-Atlantic perspectives will also be given by **PAUL FRAIM**, Mayor of Norfolk, **CAROLIEN GEHRELS**, Deputy Mayor of Amsterdam, and **PAULA VERHOEVEN**, Director of Sustainability and Climate Change, City of Rotterdam.

SPEAKER BIOS



MELANIE SCHULTZ VAN HAEGEN | Dutch Minister of Infrastructure and the Environment

Melanie Schultz van Haegen was appointed State Secretary for Transport, Public Works and Water Management in the Netherlands in 2002. She was responsible for aviation and water management. Since 2010, Ms. Schultz van Haegen has been the Minister of Infrastructure and the Environment. While in Washington in March, Minister Schultz and Secretary Donovan signed a memorandum of understanding to enhance the exchange of knowledge and expertise in water management between the Netherlands and the USA. Minister Schultz noted: "Although the scale of our landscapes differs, New York and the Netherlands have a lot in common. Both areas are river deltas. Both areas have estuaries, rivers and water basins that are vulnerable to flooding. The Netherlands has a long history in water management, but I am not coming only to bring Dutch expertise. I am also here to learn from the American approach."



SHAUN DONOVAN | US Secretary of Housing and Urban Development

On January 26, 2009, Shaun Donovan was sworn in as the 15th United States Secretary for Housing and Urban Development. In December 2012, when President Obama signed an Executive Order creating the Hurricane Sandy Rebuilding Task Force, he appointed Secretary Donovan as Chair. The Task Force has created a comprehensive regional plan, based on local visions for redevelopment, to guide long term disaster recovery efforts. Secretary Donovan holds a B.A. and Masters degrees in Public Administration and Architecture from Harvard.



TRACY METZ | Writer and Journalist

Tracy Metz is a well-known journalist and author based in the Netherlands. She writes for the national newspaper NRC Handelsblad and is an international correspondent for the magazine Architectural Record. In 2007-08 she was a member of the Delta Commission that advised the Dutch government on water safety. Her most recent book is Sweet & Salt: Water and the Dutch.



ADAM FREED | Director of The Nature Conservancy's Securing Water Program

Adam Freed is the Director of the Nature Conservancy's Global Securing Water Program, which is working to help provide safe, sustainable, and reliable water services for people and nature. Adam previously served as the Deputy Director of Mayor Bloomberg's Office of Long-Term Planning and Sustainability, where he oversaw the implementation of and process to update the city's long-term sustainability plan (PlaNYC) and advised the Mayor on sustainability and climate-related issues.



HENK OVINK | Hurricane Sandy Rebuilding Task Force/HUD, Dutch Ministry of Infrastructure and the Environment

Henk WJ Ovink is senior advisor for Secretary Shaun Donovan of Housing and Urban Development in his role as Chair of the President's Hurricane Sandy Rebuilding Task Force. Ovink is responsible for the long term planning strategy, the regional design competition 'REBUILD BY DESIGN' and the connected planning conference. He works on the Task Force's legacy process, the regional resilience science center, regional infrastructure coordination and on the overall Task Force strategy.

SPEAKER BIOS



ZACK SMITH | Member of the Executive Board of Arcadis

Zack Smith was Chief Strategy and Sales Officer for ARCADIS US until May 2013 and remains a member of the board of ARCADIS Logos in Brazil. He has more than 29 years of experience managing and directing management teams to successfully provide a wide range of environmental services for large facilities throughout the US. Mr. Smith holds a BSc and MSc in environmental engineering and has extensive knowledge of the US and South American markets. He was appointed to the executive board of ARCADIS NV in 2013.



DANIEL ZARRILLI | Director of Resiliency for the City of New York

Daniel Zarrilli is the Director of Resiliency for the City of New York. Mayor Bloomberg appointed Daniel in June 2013 to lead the implementation of the City's PlaNYC resiliency report. Previously, he served on the Mayor's Special Initiative for Rebuilding and Resiliency, leading the City's efforts to develop a comprehensive coastal protection plan for the five boroughs, and as Senior Vice President for Asset Management at the NYCEDC, responsible for maritime assets and operations.



ROLAND LEWIS | President and CEO of Metropolitan Waterfront Alliance

Roland Lewis is President and CEO of the Metropolitan Waterfront Alliance. Under his leadership, the MWA has organized a growing consistency for a vibrant, healthy and accessible waterfront, instituted programs to provide water access, and become the leading waterfront policy organization in the New York region.



DAVID WAGGONNER | Principal of Waggonner & Ball Architects

David Waggonner is principal of Waggonner & Ball Architects, a New Orleans-based, internationally active architecture and planning firm. Mr. Waggonner is the initiator of Dutch Dialogues and is currently leading a team of local and international experts to develop a Comprehensive Water Plan for the Greater New Orleans region to create a model of sustainable delta urbanism.



CARTER STRICKLAND | Commissioner of the NYC Department of Environmental Protection

Carter Strickland was appointed to be the Commissioner of the New York City Department of Environmental Protection (DEP) on August 17, 2011. Previously, he served as Deputy Commissioner for Sustainability at DEP. Before joining DEP, Commissioner Strickland was the Senior Policy Advisor for Air and Water with the Mayor's Office of Long Term Planning and Sustainability, where he was responsible for the implementation of PlaNYC across all agencies and departments, with a focus on water, air, and natural resource issues.

SPEAKER BIOS



DAVID B. ROSENBLATT | Administrator, Office of Engineering and Construction, State of New Jersey

As Administrator of the NJ Department of Environmental Protection's Office of Engineering and Construction for nine years, David Rosenblatt has been designing, budgeting, and developing project partnerships with the US Army Corps of Engineers and with municipalities to provide coastal storm damage reduction projects and flood control projects. David Rosenblatt assisted Governor Christie's Flood Advisory Commission in its recommendations for flood control and flood risk mitigation in the Passaic River Basin in 2010 and similarly assisted with the Delaware River Flood Mitigation Task Force Report to Governor Codey in 2005; each effort was subsequent to significant repetitive flooding in these river basins.



VENETIA LANNON | New York State DEC Regional Director

Venetia Lannon is Regional Director at the New York State Department of Environmental Conservation for Region 2, comprised of the five boroughs of New York City. Prior to that, she was a Senior Vice President at the New York City Economic Development Corporation, where she led the Maritime group. In this role she oversaw the City's efforts to develop its marine terminals, port facilities, private ferry landings, heliports and freight rail assets.



GARRET GRAVES | Chair of the Coastal Protection and Restoration Authority of Louisiana and Executive Assistant to the Governor for Coastal Activities

Garret Graves is the current Chair of the Coastal Protection and Restoration Authority of Louisiana (CPRA). The CPRA was established after Hurricane Katrina as the state agency leading hurricane protection, flood control, ecosystem restoration and other community resiliency efforts. His efforts to restructure and streamline Louisiana's coastal programs and agencies resulted in increasing project output by more than 500 percent. The authority currently oversees a \$17 billion coastal resiliency, hurricane protection and oil spill recovery program. In his role as Executive Assistant for Coastal Activities, Graves is Governor Bobby Jindal's advisor on policy issues related to offshore energy, fisheries, maritime and other uses and conservation of coastal resources.



JOE VIETRI | Director U.S. Army Corps of Engineers National Planning Center of Expertise for Coastal Storm Risk Management

As Director of the U.S. Army Corps of Engineers National Planning Center of Expertise for Coastal Storm Risk Management, Mr. Joseph R. Vietri leads a national team providing coastal engineering and environmental leadership for the Corps, nationally and internationally. Mr. Vietri has had a major role in the Corps Sandy Recovery efforts and is leading the North Atlantic Coast Comprehensive Study. Mr. Vietri is also the Chief of Planning Division at the U.S. Army Corps of Engineers North Atlantic Division.



PHILIP GIANG | Senior Associate, Perkins Eastman

Philip Giang is currently a senior associate at Perkins Eastman, and is one of the founding partners of PacificXanh LLC, a real estate JV Partnership. Philip was born in a small village in southern Vietnam. He has more than 18 years experience designing large scale mixed use urban design and land planning projects throughout the United States, the Caribbean, Europe and Asia.

SPEAKER BIOS



SAM ROBERTS | Writer and Journalist

Sam Roberts has been The Times's Urban Affairs Correspondent since 2005. He is the host of The New York Times Close Up, an hour-long weekly news and interview program on New York 1. He also has hosted weekly podcasts for The Times called "The Caucus" and "Only in New York." Prior to joining The Times, he worked for 15 years at the Daily News. In his years as a journalist, Mr. Roberts has won awards from the Society of the Silurians and the Newspaper Guild of New York and has received the Peter Kihss Award from the Fund for the City of New York. His magazine articles have appeared in The New York Times Magazine, the New Republic and New York. He has written many books on American politics, urban affairs and other topics.



PIET DIRCKE | Professor of Urban Water Management, Rotterdam University of Applied Sciences, Arcadis

Mr. Dircke is Director of the ARCADIS Global Knowledge Network for Water Management. He is also a Professor of Urban Water Management at the Rotterdam University of Applied Sciences. His work focuses on best global practices of water management and innovative climate adaptation in urban deltas and coastal cities, and on smart and multifunctional flood protection systems.



PAULA VERHOEVEN | Director of Sustainability and Climate Change, City of Rotterdam

In 2009, Paula Verhoeven was appointed the first Director of Sustainability and Climate Change in the Netherlands. Her key objectives are to ensure that in the year 2025, CO2 emissions will be reduced by 50%, the city of Rotterdam will be fully climate proof, and that because of this sustainable approach, significant economic growth will have been achieved.



CAROLIEN GEHRELS | City of Amsterdam, Deputy Mayor

Carolien Gehrels has been Deputy Mayor of the city of Amsterdam since April 2006. She is responsible for economic affairs, art and culture, local media, monuments, infrastructure and water, business, competition and purchasing.



PAUL FRAIM | Mayor of Norfolk

Mayor Fraim received his Master of Education from the University of Virginia and his law degree from the University of Richmond. He began private practice in May 1977, and is presently president of the law firm Fraim and Fiorella, PC. A member of Norfolk City Council since 1986, he was appointed Mayor on July 1, 1994, and was reappointed every two years until May 2006 when he became first popularly elected mayor since 1916. He was re-elected to a new four-year term beginning July 2010.

STRATEGY TEAMS

The American approach to protecting vulnerable coastal areas and preventing disasters differs from the Dutch approach. In the H209 Forum Strategy Sessions, three American-Dutch teams have collaborated on how to protect a specific area of New York City or New Jersey from future storms. Delegates visiting H209 Forum can expect very lively, animated presentations by the three teams, and solutions ‘in the real world,’ on day one of the conference (September 9).

Each team is joined by US and Dutch experts, combining the best knowledge and experience of both worlds. The teams will share with delegates what they have in their toolkit – and in this integrated scenario they can show some of the sharpest tools in the shed. We thank all team members for their inspirational contributions, ideas, knowledge, suggestions and hard work to make H209 Forum successful.

TEAM DOWNTOWN MANHATTAN

ARCADIS – Edgar Westerhof (team leader) and Egon Bijlsma

REGIONAL PLAN ASSOCIATION – Laura Tolkoff

ASFPM – Bo Juza

NEW YORK CITY DEPT. OF BUILDINGS – Joseph Ackroyd

CITY OF AMSTERDAM – Ellen Monchen

TYGRON – Annebeth Loois and Florian Witsenburg

THE BATTERY CONSERVANCY – Hope Cohen

Team Advisors: Michael Levine and Diana Switaj (NY Community Board 1)

TEAM JAMAICA BAY

FUGRO ATLANTIC – Tom McNeilan (team leader), Sally McNeilan, Job Nijman

REGIONAL PLAN ASSOCIATION - Kyle Kozar

PROVINCE OF NOORD-HOLLAND – Mark Eker

PRATT INSTITUTE – Ron Schiffman and Elisabetta DiStefano

ARCADIS USA – Rob Daoust

REBEL GROUP/IMG GROUP – Marcel Ham, Stefan Nijwening and Steve Steckler

3Di – Hans Gehrels and Wytze Schuurmans

PERKINS EASTMAN – Eric Fang

THE NETHERLANDS CONSULATE GENERAL NY – Arjan Braamskamp

Team Assistant: Rosa Ronsdorf

TEAM JERSEY SHORE

BOROUGH OF SEA BRIGHT – Mayor Dina Long

DUTCH DELTA COMMISSION – Ivette Meijerink

LOUIS BERGER GROUP – Niek Veraart

THE NEW JERSEY INSTITUTE OF TECHNOLOGY – Keith Krumwiede, Tom Dallessio and his students

THE SUSTAINABILITY INSTITUTE AT THE COLLEGE OF NEW JERSEY – Robin Murray FAIA PP

PROGRAM DAY TWO

WORKSHOP

DESCRIPTION

For most sessions, since many delegates want to attend, we will have two types of participants: speaker/participants (max. 20), and listeners. More speakers will be at the sessions than are listed in this printing.

THE BENEFITS OF AN INTEGRATED APPROACH FOR COASTAL ADAPTATION IN NEW YORK AND NEW JERSEY

Developed by RPA with HH 500

09:00am-01:00pm | COLUMBIA UNIVERSITY, LERNER HALL | Satow Room, Fifth Floor
2920 Broadway (114th Street and Broadway) | New York, NY 10027

New concepts in terms of governance, cooperation and innovative designs and financing are required to gain momentum for successful integrated development of maritime structures and nature. In the USA and the Netherlands these new concepts are materializing. Discussing the challenges and opportunities of these new approaches is the focus of this small but rich workshop.

This key session of H209 will have a (little) summit-like character, followed by a joint lunch (1:00 - 2:00) where we can informally continue the discussion.

With: Moderator Tracy Metz (journalist and writer), Robert Yaro (RPA), Carolien Gehrels (Deputy Mayor of Amsterdam), Henk Ovink (HUD and Ministry of Infrastructure and the Environment), Jim Redick (City of Norfolk), Warrie Price (Battery Conservancy), Jos van Alphen (Dutch Delta Commission), Adam Freed (The Nature Conservancy), Rob Pirani (RPA), Han Meyer (Delft Technical University), Camiel van Drimmelen (City of Amsterdam), and Howard Slatkin (City of New York).

SIRR: IMPLEMENTATION OF THE PLAN FOR A STRONGER, MORE RESILIENT NEW YORK

Developed by the Metropolitan Water Alliance

02:00pm-05:30pm | COLUMBIA UNIVERSITY, LERNER HALL | Satow Room, Fifth Floor
2920 Broadway (114th Street and Broadway) | New York, NY 10027

The purpose of this session is to uncover and begin to map out the barriers to implementing coastal and waterfront sections of New York City's plan for resiliency, the SIRR plan. The SIRR plan provides a road map for the City and its state and federal partners to begin to protect New York City from the effects of climate change with a special emphasis on waterfront resiliency in light of the damage caused by Superstorm Sandy.

The SIRR plan by all accounts is one of the most comprehensive and rigorously developed multi-pronged strategy to protect an urban area from the effects of climate change. It calls for a wide variety of soft and hard engineering solutions to be constructed in different waterfront locations based upon an analysis of vulnerabilities to storm surges and wave action in different parts of the City.

This wide variety of solutions – from tidal gates to wetlands to removable walls – will require extensive funding, possible shifts in the environmental regulations that apply to the waterfront, new governance and management structures within New York City, as well as community input and support. In this workshop we will discuss these challenges to implementation and how to address them, including new partnerships and governance structures that will be required, and ways to move this work forward from the perspective of the civic, government, activist, and private sectors.

Moderators: John Boulé (Vice-Chair MWA Board of Directors), Cortney Worrall (Chief Operating Officer, MWA)

PROGRAM DAY TWO

WORKSHOP

DESCRIPTION

HOW TO KEEP THE JAMAICA BAY AREA SAFE AND RESILIENT

Developed by: Team Jamaica Bay

09:00am-03:30pm | MUSEUM OF JEWISH HERITAGE, EDMOND J. SAFRA PLAZA

36 Battery Place | New York, NY 10280

In this session, on day two of H209 Forum, H209 Strategy Team Jamaica Bay will focus on solutions for this multi-faceted area near New York City. What are the latest, most cutting edge techniques, solutions and approaches to protect Jamaica Bay, which is home to JFK airport, beautiful beaches, nature, and residential areas?

David Waggoner, Principal of Waggoner & Ball Architects, will explore opportunities for a water strategy for Jamaica Bay. Mr. Waggoner leads an interdisciplinary, international team that has produced a comprehensive water plan for the New Orleans region.

The Rebel Group, with the IMG Group, will explore innovations in funding and financing of resilient areas and cities.

With: David Waggoner (Waggoner & Ball Architects), Tom McNeilan (Fugro), Kyle Kozar (RPA), Wytze Schuurmans (3Di), Hans Gehrels (3Di), Elisabetta DiStefano (Pratt Institute), Robert Daoust (Arcadis USA), Marcel Ham (Rebel Group/IMG group), Stefan Nijwening (Rebel Group/IMG group), Eric Fang (Perkins Eastman), Mark Eker (Provincie Noord Holland)

HOW TO KEEP THE JERSEY SHORE SAFE AND RESILIENT

Developed by Team Jersey Shore

09:45am-04:30pm | SEA BRIGHT, NEW JERSEY | COMMUNITY CENTER

1167 Ocean Avenue | Sea Bright, NJ 07760 | Tel. 732-842-0099

In this session, on day two of H209 Forum, Team Jersey Shore focuses deeper on solutions for this iconic coastal region, with the Borough of Sea Bright as example. What are the latest, cutting edge techniques, solutions and approaches to protect the Jersey Shore, which is home to beautiful beaches, nature, and residential areas?

As part of this workshop in Sea Bright (New Jersey), the Dutch Delta Commission and the Dutch Ministry of Infrastructure and the Environment will share with delegates the soon to be published "Dutch National Vision Coast" - with the latest views on an integrated coastal approach.

Also on the agenda: BUILDING WITH NATURE. Low-lying, densely populated coastal areas worldwide are under threat, requiring coastal managers to develop new strategies to cope with land subsidence, sea level rise and the increasing risk of storm-surge-induced floods. Traditional engineering approaches optimizing for safety are often suboptimal with respect to other functions and are neither resilient nor sustainable. Densely populated deltas in particular need more resilient solutions that are robust, sustainable, adaptable, multifunctional and yet economically feasible. Innovative concepts such as 'Building with Nature' provide a basis for coastal protection strategies that are able to follow gradual changes in climate and other environmental conditions, while maintaining flood safety, ecological values and socioeconomic functions.

With: Moderator Robin Murray (The Sustainability Institute at the College of New Jersey), Mayor Dina Long (Mayor of Sea Bright), Ivette Meijerink (Dutch Delta Commission), Niek Veraart (Louis Berger Group), Keith Krumwiede (NJIT), Tom Dallessio and his students (NJIT), Jan Peelen (Dutch Ministry of Infrastructure and the Environment)

**A shuttle bus will be available to bring delegates to their destination in Sea Bright from Atlantic Highlands, NJ, which is a 45-minute powerboat ride from Wall Street (departing from Pier 11 on the East River (SeaStreak, www.seastreak.com)).*

PROGRAM DAY TWO

WORKSHOP

FINDING NEW WAYS TO PROTECT CRITICAL FUNCTIONS AND INFRASTRUCTURE

Developed by the City of Amsterdam

DESCRIPTION

09:00am-03:30pm | COLUMBIA UNIVERSITY, AVERY HALL | Room 505

1172 Amsterdam Avenue (116th Street and Amsterdam) | New York, NY 10027

This workshop focuses on discussing the challenges and opportunities of improving the protection of critical functions and infrastructure, in New York and Amsterdam, with the emphasis on the following critical functions: energy supply, drinking water supply, chemical industry and transit.

With: Rae Zimmerman (NYU), Daniel Zarrilli (NYCEDC), Rob Koeze (Waternet), John Keifer (City of Norfolk), Fiona Cousins (Arup), Ellen Monchen (City of Amsterdam), Peter Glus (Arcadis), and Wiegert Dulfer (Waterboard AGV)

BUILDING CLIMATE RESILIENT COMMUNITIES

Developed by Arcadis, RDM Campus, the City of Rotterdam, and CURE.

09:00am-03:30pm | COLUMBIA UNIVERSITY, FAYERWEATHER HALL | Room 323

1172 Amsterdam Avenue (116th Street and Amsterdam) | New York, NY 10027

Resilient waterfront communities are not merely resilient because of flood and climate adaptation strategy, but resiliency manifests itself in the affected communities through socioeconomic, environmental, educational, technical and policy-related aspects. The exchange of knowledge about climate adaptation and mitigation is crucial.

The objective of this one-day shirt sleeve session is to continue and further establish the foundation for a K2K network that was laid recently in Rotterdam during a similar NYC-Dutch preparatory event that compliments and builds upon the existing G2G platform between Rotterdam/the Netherlands and New York and facilitates solutions to present and future resiliency development challenges in urbanized settings.

Short-term objective: to compare opportunities for improving resiliency of affected communities in flood-prone areas in NYC and Rotterdam and to investigate the possibility to develop a framework for this comparison. Medium- to long-term objective: to develop a (virtual) Community of Practice, a lean and mean, functional and relevant knowledge network with Rotterdam and NYC (and other comparable cities), universities and knowledge institutions. This K2K network could be part of the G2G network of the CDC Connecting Delta Cities Network of the C-40, led by Rotterdam and NYC.

INNOVATIONS IN WATER TECHNOLOGY - THE FUTURE OF A SCARCE RESOURCE

Developed by ARCADIS, NYDEP and Waternet - Amsterdam

09:00am-01:00pm | COLUMBIA UNIVERSITY, FAYERWEATHER HALL | Room 321

01:00pm-05:00pm | NEWTOWN CREEK WASTEWATER TREATMENT PLANT | 329 Greenpoint Avenue | Greenpoint, Brooklyn

As the world population continues to grow, the amount of water on earth doesn't change. Competition for this scarce resource continues to increase. In response to this competition, new technologies are being continuously developed to protect scarce water resources and treat water/wastewater (and its byproducts) for future reuse. Not only are we seeing innovations in treating water and wastewater, but also in managing and treating contaminants in stormwater/floodwaters. The objective of this one-day shirt sleeve session is to highlight innovations in New York City and Amsterdam, and provide an overview of trends globally in water treatment, wastewater treatment, and stormwater treatment. We will also take a step into the future by using our newly acquired knowledge to brainstorm transformation of a wastewater treatment plant into a water resource recovery facility/energy efficient resource recovery (E2R2) facility (i.e. the wastewater treatment plant of the future).

With: NYDEP (Vinnie Sapienza), Waternet (Rob Koeze/Gerard Rundberg), Drexel University (Franco Montalto), Columbia University, International Water Association, ARCADIS (Eleanor Allen, Doug Owen, Joe Husband, and Eric van der Zandt), and more.

PROGRAM DAY TWO

WORKSHOP

DESCRIPTION

NEXT GENERATION URBAN PLANNING IN DOWNTOWN MANHATTAN

Developed by Tygron

10:00am-04:00pm | COMMUNITY BOARD ONE
49 Chambers Street, Room 715 | New York, NY 10007

The session is brought to you by Community Board 1 and Tygron. Tygron has developed the Tygron Engine, offering a unique way of generating mutually acceptable outcomes in urban and community resilience. The session will be focused on the resilience of lower Manhattan and the development of Seaport City. Participants will negotiate, collaborate and reach consensus effectively in a realistic, virtual world. Consequences are calculated and visualized, giving individual users deeper insight into areas of conflict or mutually beneficial solutions beforehand.

With: Diana Switaj (Director of Planning at Manhattan Community Board 1), Annebeth Loois MSc. (Consensus Building, Integrated Water Management)

ESSAY BY JESSE M. KEENAN

SINK OR SWIM: THE DUTCH AMERICAN DIALOGUE

The Netherlands and the United States are both at pivotal time in history where the challenges of managing the built environment in the face of climate change represent both a risk and an opportunity. While public opinion and political will varies significantly between the two nations as to the role of government in disaster planning, catastrophic insurance coverage and local planning, the life-safety goals are largely the same. Likewise, whether it is the imposition of greater fiscal austerity or the potential for further catastrophes, both countries share a tremendous opportunity to leverage public resources for the advancement of technology and education which has the potential to be a globally transformative force with positive domestic economic and social implications.

Both countries share delegated federalist structures which are increasingly reliant of federal leadership and resources. This trend has the potential to be a positive one as it mitigates a race to the bottom by and between local jurisdictions for attracting risky development. In one extreme or another, the declining utility of parallel local bodies undertaking duplicate and often inconsistent goals has the potential to accelerate significant institutional change in the near term. However, recent U.S. Supreme Court decisions, including *Koontz v. St. Johns River Water Management District*, are rapidly accelerating a redefinition of institutional roles in regulating the built environment as a function of shifting the balance of negotiating power by and between public and private actors. Likewise, the Dutch are not immune from institutional change as even the future of the famed Dutch Water Board System and their associated taxing power is up for debate.

Both Minister van Haegen and Secretary Donovan have the opportunity to define a legacy which repositions the challenge of climate change as an opportunity for greater financial sustainability of households, for technological innovation and for economic development. Whether it is RDM in Rotterdam, which serves the dual purpose of advancing technical education and incubating technology start-ups, or NYC's Seaport City, which will serve as opportunity to promote public infrastructure investment through the leveraging of private capital, the opportunities are only bound by the limits of the human imagination and applied innovation.

These examples are just one of many undertakings which speak to the emergence and redefinition of a larger regional adaptation strategy which balances technical interventions with behavioral modification of risk-adjusted activities of markets and consumers. Both countries are moving away from a uniform risk-standard which has historically been applied relatively equally across very different risk-adjusted geographies. While both countries have very different profiles in terms of the potential for mass catastrophes, the trend towards more accurately assigning risk to development behavior will have a significant impact on settlement patterns in some of our most densely populated parts of our respective countries. These decisions raise larger issues of equity where no easy answer can be engineered or designed away. As such, these tough decisions require leadership which ascribes some degree of sensitivity to those most vulnerable populations who must be led through this transition.

The challenges we face are well defined. As such, H209 offers the opportunity to define the opportunities in the financing, design, construction, preservation, maintenance and performance of smart waterfront development. Had the Dutch West India Company dwelled on the human risks of exploring the Hudson Valley or had the Americans dwelled on the financial risks of the Marshall-hulp, our countries might have had very different historical narratives. Instead, we share a history defined by opportunity and climate adaptation is just one facet that unites our mutual ambitions to advance our respective economies and environments.

ESSAY BY ROLAND LEWIS

New York's greatness began with its abundant natural harbor. Our destiny is and will always be tied to the water. Superstorm Sandy gave us all an unforgettable wakeup call and reminder. We are island people living in a city of water. Protecting ourselves from the increasing threat of sea level rise is an existential challenge for our city. The water that surrounds is a challenge but it is also one of our greatest assets. We must use it for recreation, transportation, education and jobs. We have made tremendous progress over the last ten years reacquainting ourselves with our harbor and waterways and now working to make our region more resilient. We must continue. The cost of inaction is incalculable in this new era of climate change. Economic growth, improved quality of life and environmental protection are all reachable. This is the resilient city of water to which we aspire.

Roland Lewis is President and CEO of the Metropolitan Waterfront Alliance



ESSAY BY ROBERT PIRANI AND ROBERT YARO



ROBERT YARO
President of the Regional Plan Association



ROBERT PIRANI
Vice President for Energy and Environment
Regional Plan Association

New York grew up hard by the water. And we have been living with water ever since. But Hurricane Sandy, and its wake of devastated communities and climate consciousness, has altered the nature of this relationship forever.

Our perspectives on water have always been changing. The destruction of oyster reefs that once defined the estuary's ecology and local dinner tables. The shifting of trade and commerce, from Whitehall gigs to postPanamax ships. The creation of one infrastructure for safe, reliable fresh water, and another to process our discharge. The revitalization of waterfronts for recreation and housing. The growth, loss, and growth again of our ferry fleet. Like any marriage, the bonds between this region and its waters are constantly evolving.

The response to Hurricane Sandy, and the alarm bells it has sounded, will again shift this relationship. We will always live with the water; the question is how.

ESSAY BY HAN MEYER

THE DUTCH DELTA IN 2109

Suppose that Henry Hudson returned to the Netherlands in 2109, five hundred years after his discovery of Manahattan. He would find an almost unrecognizable land; incomparable with the country he had left.

When he embarked from Amsterdam in April of 1609, his last view of the city was the skyline, dominated by the towers of the city gates and some churches. Crossing the North Sea, his last view of the Netherlands was the seemingly endless row of dunes and sandy beaches, interrupted only by a series of estuaries in the Southwest. Being an experienced seaman, he knew that these estuaries provided access to important port cities like Rotterdam, Antwerp, and many others smaller harbors.

During the course of those five centuries, much would have changed in the Netherlands. The Dutch dug new canals from the coast to Amsterdam and Rotterdam, and built several dams to defend their country. These dams have made the territory safer, but have also resulted in the closing-off of most of the smaller ports from the sea. The ecosystems in the estuaries and former seas have suffered from the dams and the port-related industries. The Dutch have also expanded the port area of Rotterdam, and built a train station along the harbor of Amsterdam, cutting off the city from the water. In the early 21st century, many high-rise buildings were built on former port areas in both cities. Later in the 21st century, a new Delta Program resulted in new projects combining sustainable flood defense, clean energy supply and attractive deltaic urban environments.

Hudson, returning in 2109, would not believe his eyes. As he arrives, passing the coastline of the southwest delta, he sees a series of storm surge barriers, all of them combined with tidal power plants and large windmill parks which provide energy for the whole northwest part of Europe. Passing the port of Rotterdam, he observes the most recent reclamation of the port in the sea: an impressive new harbor, the Third Maasvlakte. The reclamation is a surprising combination of port terminals, dunes, beaches and wetlands, providing good conditions for a rich ecosystem and popular recreation and leisure facilities. The river Nieuwe Maas has been returned to a natural estuary, with wetlands and islands, which transform Rotterdam into a city with beautiful estuary-parks. Further along the coast he sees a series of artificial sandy islands, which provide the necessary sand to the coastline by tidal currents to maintain the strength of the coast as flood defense line.

As he reaches Amsterdam, he discovers that the Zuiderzee (South Sea) has been turned into a large freshwater lake, the IJsselmeer, providing fresh water to the whole country. The lake's interior dams and locks have been removed, replaced by lakefront wetlands and islands with holiday houses. Small ferry-boats connect the waterfront of Amsterdam with towns at the shores of the IJsselmeer. Ferryboats bustle back and forth.

His first evening, Henry Hudson has to recover from all these exciting experiences by enjoying a rich meal of lobster and oysters from the southwest delta and eel and pike from the IJsselmeer. He decides that this is great place to stay for the next 500 years; or just as his first mate wrote in the ship's log about New York in 1609, "a very good harbour for all winds."

Han Meyer is a Professor of Urban Design at Delft University of Technology

ESSAY BY LENNART SILVIS

Lennart Silvis is Managing Director of the Netherlands Water Partnership.

Wind, water and wide open spaces have shaped the Netherlands and its history. Our country is a vulnerable yet safe delta, partly below sea level. To the Dutch, water has always been both friend and foe. Severe flood events often trigger the development of new flood risk management policies. This certainly has been the case in the Netherlands. It has taught us to cooperate and to use our creativity and skills for our very survival. The Netherlands may be small on the world map but its water professionals with their expertise have been involved in most large, foreign water projects for decades. Today the focus is on raising the profile of water on the worldwide agenda by engaging in international knowledge exchange and collaboration. Dutch American collaboration is a good example of this. The world faces an increasing number of water challenges. A single country, however, cannot resolve these challenges alone; global collaboration is needed more than ever. Let's work together!



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SWEET AND SALT

Sweet&Salt: Water and the Dutch, a co-production of journalist and author Tracy Metz and art historian Maartje van den Heuvel, tells the story in words and images of the extreme makeover of the Dutch landscape in order to accommodate a new relationship to water. With centuries of experience under their belt in keeping the water out – a condition for survival in a country where 70% of the GDP is earned below sea level – the Dutch are now discovering that it might be wiser let the water in. Rather than raising the dikes higher and higher, they are in some places being lowered to allow controlled flooding. Urban designers, architects and water managers are working together in a novel fashion to create urban and natural environments that give more space to water and by doing so are cooler, more attractive and safer. Prevention is still a national priority, certainly as compared to the American approach of repair after the fact, but the Netherlands now view water as their 'frenemy'.

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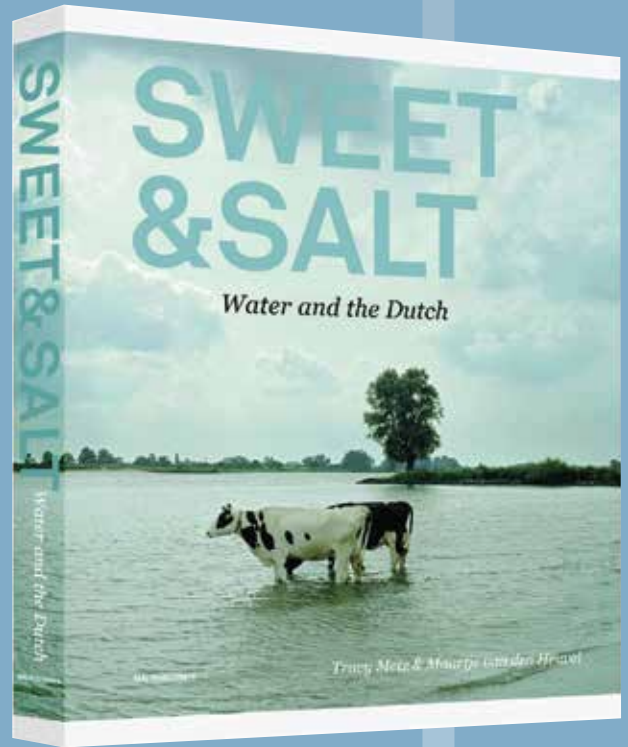
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The unique character of New York City, originally New Amsterdam, has been shaped by the legacy of the tolerant and entrepreneurial culture of the 17th century Dutch Republic. Besides celebrating American-Dutch history, the Henry Hudson 500 Foundation promotes future ties between New York and The Netherlands that are linked by their shared belief in the value of free, diverse, and entrepreneurial societies. www.henryhudson500.com



The Regional Plan Association is America's oldest independent urban research and advocacy organization. RPA works to improve the prosperity, infrastructure, sustainability and quality of life of the New York-New Jersey-Connecticut metropolitan region through work in transportation, economic development and real estate, environment and open space and more. They also provide leadership on transportation, environmental and economic-development issues in the Northeast and across the U.S.



The Metropolitan Waterfront Alliance works to transform the New York and New Jersey Harbor and Waterways to make them cleaner and more accessible, a vibrant place to play, learn and work with great parks, great jobs and great transportation for all. With over 700 Alliance Partners representing maritime businesses, community and environmental groups, recreational boaters and others, MWA brings together a diverse coalition of stakeholders working toward a powerful shared vision—a harbor and waterways alive with commerce, recreation and transportation. Through organizing, research and policy work, MWA advocates for common ground solutions to complex, multi-dimensional challenges.



The Center for Urban Real Estate (CURE.) at Columbia University represents a new paradigm in real estate development research and practice, applied as a transformative and positive force. From climate change and energy dependence to the socioeconomic and political upheaval they engender, CURE addresses emerging and current global issues through the lens of urbanization.

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The Ministry of Infrastructure and Environment is committed to improving quality of life, access and mobility in a clean, safe and sustainable environment. The Ministry strives to create an efficient network of roads, railways, waterways and airways, effective water management to protect against flooding, and improved air and water quality.

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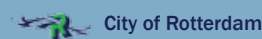


3Di Water management is a research program carried out by the 3Di parties: Nelen & Schuurmans, Deltares and Delft University of Technology. They have developed a web based application for high speed hydraulic computations on a detailed spatial scale, using modern day high resolution datasets.

BENEFACTORS



The work of the Amsterdam Physical Planning Department integrates the higher levels of regional and long term planning into to the details of public space design. They search for new approaches and stimulate bottom up processes to integrate solutions in the fields of urbanization, mobility and water management in multidisciplinary teams.



Rotterdam is the safest low-lying delta city in the world. The lowest point in the greater Rotterdam area is 6.76 meters below sea level, and 80% of the city itself is below sea level. The Rotterdam port's direct and indirect added value exceeded €18 billion in 2010. In 2008 Rotterdam launched the Rotterdam Climate Proof program in order to make Rotterdam resilient to climate change by 2025. Rotterdam is founder of the Connecting Delta Cities network, a global network for delta cities facing the consequences of climate change.



"And as the moon rose higher the inessential houses began to melt away until gradually I became aware of the old island here that flowered once for Dutch sailors' eyes — a fresh, green breast of the new world. Its vanished trees, the trees that had made way for Gatsby's house, had once pandered in whispers to the last and greatest of all human dreams; for a transitory enchanted moment man must have held his breath in the presence of this continent, compelled into an aesthetic contemplation he neither understood nor desired, face to face for the last time in history with something commensurate to his capacity for wonder."

F. Scott Fitzgerald, *The Great Gatsby*

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