

# URBAN RESILIENCE IN A CONTEXT OF CLIMATE CHANGE (URCC) CONFERENCE

**20-21 October 2020**

**100% online**

**#URCC2020**

**#YouAreClimateChange**

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Organised by

**RESCCUE**

RESILIENCE TO COPE WITH CLIMATE CHANGE IN URBAN AREAS

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# Chairs | URCC Conference



## Esteban León | UN-Habitat

Esteban has a background in economics, shelter/housing and settlement program design and management, capacity building, as well as building constructions and reconstruction projects in post-crisis situations and urban resilience building. He has been working for UN-Habitat since 2002 based in Nairobi, Geneva, Panama and Barcelona.



## Marc Velasco | Aquatec-SUEZ Advanced Solutions

Marc Velasco (MSc in Civil Engineering) has more than 10 years of experience in water-related projects, particularly modelling floods, sewer networks and water resources. He has been involved in several FP7 projects related to climate change and water and has experience on climate change impact studies, statistical analysis of climate modelling data and implementation of adaptation and mitigation measures. He has specific experience with projects related to the telemetering of water distribution networks, linking the commercial, asset management and metering systems of the SUEZ group companies. He is the project manager of H2020-RESCCUE, a multi-sectoral approach to urban resilience that is coordinated by Aquatec.

Tuesday 20		
9.30-9.45	Room Plenary	Welcome
9.45-11.30	Room Plenary	Opening plenary
12.00-13.30	Rooms 1-4	Parallel sessions
15.00-16.30	Rooms 1-4	Parallel sessions
Wednesday 21		
9.00-10.30	Rooms 1-4	Parallel sessions
11.00-12.30	Rooms 1-4	Parallel sessions
12.30-13.30	Room Plenary	Closing plenary

## How to register?

1. Go to [www.bit.ly/urcc2020\\_register](http://www.bit.ly/urcc2020_register)
2. Fill the form
3. Before the conference, you will receive a link to register to the platform
4. Register to the online platform
5. Enjoy the URCC conference!

## Organising Committee



**Gemma Noguera | Barcelona City Council**

Gemma has been working in public and non-profit organisations for almost two decades in the field of communications and awareness. Currently, she is working in the Barcelona City Council and is seconded to UN-Habitat facilitating city-to-city collaboration, knowledge sharing and outreach. Prior to joining the municipality, Gemma worked in the private sector.



**Ares Gabàs | Barcelona City Council**

Ares has been Head of the Resilience Department, which is under the Infrastructure and Urban Coordination Management of the Barcelona City Council, since November 2013. She is currently responsible for the development of the resilience strategy and project implementation carried out through the Resilience Boards (TISU). She has a background in architecture and public space design, and she has been working for the municipality of Barcelona since 2006. Before joining the Resilience Programme in September 2012, she worked in the 22@ District Transformation Project, an integrative urban renewal process of the former industrial area of Barcelona.



**Helene Fourniere | UN-Habitat**

Helene is an urban resilience expert with an academic background in architecture and urban fields and further specialisation spanning from sustainable development to resilience and disaster risk reduction. She joined UN-Habitat City Resilience Profiling Programme in 2013, based in Nairobi (Kenya), and, in 2015, she relocated to Barcelona (Spain). Currently, she is focused on normative and operational activities, including the deployment of the Programme in Dakar, Senegal, and providing technical expertise to the RESCCUE project. Prior to that, she worked in the French public administration, as well as in architectural conservation and transformation in Zanzibar.



**Beniamino Russo | Aquatec-SUEZ Advanced Solutions**

PhD in Civil engineering, full professor of Hydraulics and Hydrology at the Technical College of La Almunia (University of Zaragoza, Spain) and Director of the GIHA (Group of Hydraulic and Environmental Engineering) Research Group. R&D+i project manager at AQUATEC Suez Advanced Solutions. Associate professor at the Technical University of Catalonia. Author of more than 100 papers in peer-reviewed journals and international conferences proceedings in the field of flood risk management and urban drainage.



**David Pacheco | Cetaqua**

David Pacheco is an environmental communications specialist with an audiovisual media and corporate communications background. He has experience in managing the communication and dissemination of environmental-related initiatives, mainly focused on water resources, water quality and urban resilience. From Cetaqua's end, David is in charge of the design, implementation and evaluation of the communication strategy of different European research projects funded under Horizon 2020 and LIFE programmes. He is currently involved in H2020-RESCCUE, where he leads the Communication and Dissemination Work Package.

## Scientific Committee

The URCC Scientific Committee is made up by experts from different backgrounds that advise on the organisation of the conference:

**Amaia Celaya** | UN-Habitat

**Àngel Villanueva** | Aquatec-SUEZ Advanced Solutions

**Dominic Royé** | Universidade de Santiago de Compostela

**Gemma Conde** | Barcelona Regional

**Laia Romero** | Isardsat

**Lindsey McEwen** | University of the West of England

**Lorenzo Chelleri** | Urban Resilience research Network (URNet)

**Luca Pelá** | Universitat Politècnica de Catalunya

**M. Carmen Moreno Garcia** | Universitat de Barcelona

**Manuel Gómez Valentín** | Universitat Politècnica de Catalunya

**María José Estrella** | Universitat de València

**Maria Pregnolato** | University of Bristol

**Marta Galceran** | Anteverti

**Megan Rowling** | Journalist

**Montserrat Termes Rifé** | Universitat de Barcelona

**Nicola Tollin** | University of Southern Denmark

**Pere Malgrat** | Ajuntament de Barcelona

**Peter Bosch** | TNO

**Peter Joyce** | PreventProtectPrepare

**Roelof Moll** | TU Delft

**Thanasis Sfetsos** | NCSR Demokritos

**Zoran Vojinovic** | UNESCO-IHE

**Tuesday 20**

# Welcome

On behalf of the Organising Committee, the welcome session will be addressed by:

**TBC** | Barcelona City Council

**Marc Velasco** | Co-chair | Aquatec-SUEZ Advanced Solutions

**Esteban León** | Co-chair | Head of the City Resilience Global Programme, UN-Habitat

**Tuesday 20**

**9.30-9.45**

**Room Plenary**

## Opening plenary Current challenges on urban resilience in a context of climate change

**Chair:** León, Esteban

We already live in a world of cities, and that trend is expected to continue. While cities are becoming smarter, they can still be very vulnerable and fragile, with basic services failing when different kinds of impacts occur. Climate change is adding pressures and uncertainties for the economy, the environment and the society in general. In urban areas, climate change may affect urban services, such as water or energy supply. Urban resilience refers to reducing risks and damages from disasters and to the ability to quickly bounce back to a stable state.

The repercussions of each crisis depend on the city's preparedness to respond to specific predictable impacts, and the way citizens perceive and react to those impacts. These factors are extremely variable and depend on diverse issues such as the smooth operation of the systems or the level of tolerance that each society demonstrates during these events.

Cities are taking steps towards becoming more resilient and to protect their residents, their assets, and to remain functional during crises. During the last few years, a lot of work has been carried out to increase the resilience of cities, but many challenges still remain.

Urban resilience must be tackled in a holistic way, by involving the key people across all the sectors involved. This is precisely why the URCC conference starts with this plenary session, where key actors from research institutions, administrations, academia, policy makers and public service operators present their views on the current state of urban resilience, their past experiences on the field and the main challenges that must be addressed in the near future.

**Tuesday 20**

**9.45-11.30**

**Room Plenary**

## Speakers | Opening plenary



### **Rafaela Saldanha Matos | LNEC (Laboratório Nacional de Engenharia Civil)**

Dr. Rafaela Saldanha Matos is a Civil Engineer with Water and Wastewater Engineering PhD. She is Principal Researcher at LNEC since 2000, where her main areas of expertise are: urban water management, climate change and water, nature-based solutions and cities, performance assessment and benchmarking of wastewater services, and European and International water regulations and standards. She was the Head of the Hydraulics and Environment Department (2004-2016) and Vice-President of LNEC's Scientific Council (2014-2017), and an elected member of the Portuguese Engineering Academy. She has coordinated H2020 BINGO, while being a team member of H2020 RESCCUE and core-team member of LIS-Water, an International Centre for Water. She has coordinated more than 50 R&I projects and is author of 6 books and more than 350 publications. She was awarded 4 Prizes for her R&I activities.



### **Philippe Quevauviller | European Commission**

Dr. Philippe Quevauviller was a researcher in oceanography at the University of Bordeaux (France) in cooperation with the Portuguese Environment Ministry in Lisbon (Portugal) and the Dutch Ministry for Public Works in The Hague. He obtained two PhDs (oceanography and environmental chemistry) in 1987 and 1991, and the highest French University degree (HDR) in 1999. He started his career at the European Commission in 1989 as scientific officer at DG Research, then as policy officer at DG Environment and back to DG Research in the area of hydrometeorological hazards. He moved to the Secure Societies Programme in 2013, where he is responsible for research programming in the area of Disaster Resilient Societies. Since 2014, he is coordinating the development of the Community of Users on Secure, Safe and Resilient Societies.



### **Juan Francisco Arrazola | Spanish Ministry for the Ecological Transition**

Juan Francisco Arrazola is an MSc in Forest Engineering (UPM) and BSc in Economics (UNED). For more than ten years he worked on environmental impact assessment in the Spanish Ministry for the Ecological Transition and for one year at CEDEX on water-related projects. Currently, he is in charge of the implementation of the Floods Directive in the Directorate-General for Water of the Spanish Ministry for the Ecological Transition.



### **Maria Salamero | Aigües de Barcelona**

Maria Salamero is an MSc in Industrial Engineering at the Barcelona School of Industrial Engineering (ETSEIB) of the Universitat Politècnica de Catalunya (UPC) and has an MBA from EADA. For 20 years, she has been devoted to the Water and Environment Sector in the Agbar Group, in which she has held various roles and positions in the sphere of operations, technology, research and innovation. Ten years ago she led the creation of the Water Technology Centre (Cetaqua) and more recently, the School of Water. She is currently Aigües de Barcelona's Director of Sustainability and Communication Strategy with responsibilities for marketing and internal communication, external communication, and sustainable development.

# Parallel session

## Assessing urban resilience: Innovative approaches and success stories

**Chair:** Gómez, Manuel

**Keywords:** Urban resilience, Holistic approaches, Flood resilience, Cascade effects.

In a framework of close collaboration among city departments, urban service managers and other important local stakeholders, the analysis of cascade effects and connections between critical sectors and infrastructures are key elements to achieve a realistic and of holistic resilience assessment. This session presents some innovative approaches to assess and improve urban resilience and interesting implementation in several European cities.

**Tuesday 20**

**12.00-13.30**

**Room 1**

### **Assesing urban resilience in complex and dynamic systems: the RESCCUE Project approach in Lisbon Research Site**

Barreiro, João

### **Umbria Resilient Cities Network**

Bitossi, Lisa

### **Resilient Terrassa: A new resilience approach from a collaboration between Civil Protection and Smart City departments in an intermediate city**

Marín, Albert

### **Assessment of flood resilience in Barcelona for current and future scenarios. The RESCCUE Project**

Russo, Beniamino

### **Assessing connections between critical city services during extreme flooding in Bristol**

Stevens, John

### **The RGC4 project: Crisis management and critical technical networks in the case of a flood in Paris**

Vuillet, Marc

# Parallel session

## Climate impacts assessment

**Chair:** Malgrat, Pere

**Keywords:** Climate impacts, flood impacts, damage model, adaptative capacity

In order to have a complete and accurate assessment of climate impacts, a risk assessment should consider both tangible and intangible impacts related to extreme events, as well as direct and also indirect damages that are induced by the direct impacts and may occur – in space or time – outside the event. This session presents cutting edge methodologies to perform comprehensive climate related risk assessment and implementations in real cases with different scale.

**Tuesday 20**

**12.00-13.30**

**Room 2**

### **Can we quantify indirect economic impacts from pluvial flooding? A case study on transport in London**

Ford, Alistair

### **Pluvial flood damage model: Barcelona case study**

Martínez-Gomariz, Eduardo

### **Reliability and usability of multi-model projections to analyse climate impacts in urban areas**

Redolat, Darío

### **Evaluating property level adaption measures for urban scale flood resilience: A case study in Bristol, United Kingdom**

Webber, James

# **Parallel session**

## **Challenges to public health due to climate change impacts in urban areas**

**Chair:** Libchaber, Judith

**Keywords:** Health, heat waves, impacts, social

One of the major challenges that climate change is posing to urban areas, is related to public health. The concentration of population in small areas, is increasing the vulnerability of citizens, and especially to those that are already more vulnerable. Urban areas have to include climate change impacts to public health as part of their future planning, so cities can also shelter the most vulnerable when extreme events occur. This session deals with some of the major challenges related to public health, while presenting how to be more resilient to them.

**Tuesday 20**

**12.00-13.30**

**Room 3**

### **EARLY-ADAPT: Unravelling the environmental, socioeconomic and demographic drivers of recent trends in human health**

Ballester, Joan

### **Intangible damages of combined sewer overflows: citizens and business owners' perspectives**

Guerrero, María

### **Differences in heat-related mortality between socioeconomic groups at neighbourhood level in the city of Barcelona (1987- 2016)**

Quijal, Marcos

### **Impact of heat-related mortality on a global scale**

Tobias, Aurelio

### **Urban Planning for healthier Cities**

Van Herk, Sebastiaan

## Parallel session

# Innovative ways to undertake climate change

**Chair:** Buhigas, Maria

**Keywords:** Flood emergency, monitoring, emergency resources, innovation, creativity

This session will expose, with concrete examples, different ways of planning and addressing sustainability issues. How can we take advantage of co-creation to build resilience in water infrastructure? The session will explore also the participatory processes to involve citizens as key actors co-responsible for the implementation of innovative urban resilience solutions.

**Tuesday 20**

**12.00-13.30**

**Room 4**

### **A spatial optimization framework to support flood emergency planning and strategic infrastructure resilience**

Lopane, Fulvio

### **The challenge of adaptation in spatial planning: The role of the Metropolitan Cities**

Molinaro, Walter

### **Climate resilience of interconnected infrastructures: Key results from the H2020 EU-CIRCLE project.**

Sfetsos, Thanasis

### **Resilience or sustainability, what are we talking about? Defining these concepts for the Rotterdam built environment context**

Spoelman, Janneska

### **Urban resilience as a continuous improvement process: Lisbon case study**

Telhado, Maria J.

# Parallel session

## How can cities be harmonized in order to cope with climate challenges while ensuring that no one is left behind?

**Chair:** Rowling, Megan

**Keywords:** Co-creation, plan, emergency resources, innovation, creativity

Different examples will be exposed to showcase the importance of the collaboration within departments, networks, cities and citizens to better deal with the adversities of climate change. The experience of different cities such as Barcelona, which set an example for other cities to be inspired and replicates will be shown.

**Tuesday 20**

**15.00-16.30**

**Room 1**

### **Building Urban Resilience in Fragile Settings: The context of Climate Change, Conflict and Displacement**

Eltinay, Nuha

### **Science-based solutions for effective implementation of climate actions in the city of Barcelona**

González, Andoni

### **Madrid Platform Cities: An initiative by the Technical University of Madrid and Madrid City Council**

Mestre, Nieves

### **Hydromorphological and socio-cultural assessment of urban rivers to promote nature-based solutions in Dominican Republic**

Pradilla, Gonzalo

### **Climate and urban resilience - you can't have one without the other**

Ryan, Alex

### **Flexing the Adaptation Muscle: The role of experiences versus knowledge transfer in the success of resilience efforts in Southeast Asia**

Thoma, Despo

# Parallel session

## Climate resilience and community engagement

**Chair:** Celaya, Amaya

**Keywords:** Citizen engagement, social justice, capacity building, women empowerment

Different examples of citizen engagement will be exposed during this session to demonstrate the key role that society plays in the planning and the governance of the city. Cases such as the Teresina city will demonstrate that new ideas need to be incorporated into urban policies and future projects to shape a more resilient, sustainable and inclusive city.

**Tuesday 20**

**15.00-16.30**

**Room 2**

### **Enhancing Urban Resilience through the Implementation of Technological Nature Based Solutions**

Farinea, Chiara

### **Urban in Waste Reducing at Source through Community Engagement in Bogor Regency, Indonesia**

Lestari, Muji

### **Resilient Communities – An Architectural Approach to Post-Disaster Recovery**

Marmelada, Mariana

### **EU LIFE funding for Urban Resilience: Success stories**

Mengali, Lorenzo

### **Climate resilience co-planning: A comparison between Barcelona and Seville**

Satorras, Mar

### **Women for Climate Teresina – gender-based climate resilience public policy in Teresina, Brazil**

Uchoa Lima Oliveira, Rosa Gabriela

# **Parallel session**

## **Climate change resilience in urban and periurban transport systems**

**Chair:** Bellera, Marta

**Keywords:** Transport, urban resilience, climate change

Urban areas require, due to the concentration of population and economic activities, robust multi-functional transport systems that are able to function no matter what happens. Climate change may pose important challenges to the mobility systems existent in cities and its surroundings, and thus, adaptation strategies have to be include in future planning in order to be more resilient. This session presents different approaches on that matter, considering different transport networks being affected by various kinds of climate hazards.

**Tuesday 20**

**15.00-16.30**

**Room 3**

### **Facing climate change in the metropolitan mobility system of Barcelona**

Alegre, Lluís

### **Using Climate Risk and Vulnerability Assessments to INCREASE Resilience of Road Infrastructure**

Biosca, Núria

### **Flood risk assessment in underground transport systems in a context of climate change - A case study of the Barcelona metro system**

Forero-Ortiz, Edwar

### **Road network modelling for flood risk management**

Pregolato, Maria

### **Vulnerability assessment of critical point facilities and transportation infrastructure in Tacloban, Leyte: towards resilience in urban facilities planning**

Tumamao-Guittap, Geomilie

# Parallel session

## Decision support system to manage climate risk in real-time

**Chair:** Russo, Beniamino

**Keywords:** Hydro-meteorologic information, EWS, Decision support system, Forecast capacity, Holistic approaches, Flood resilience, Cascade effects

Hydro-meteorological information and early warning systems save several hundreds of lives per year, avoid disaster asset losses and produce additional benefits through the optimization of economic production in weather-sensitive sectors (agriculture, energy, etc.). This session presents several implementations and success stories of EWS and decision support systems to manage climate related risks.

Tuesday 20

15.00-16.30

Room 4

### **Green Scenario: Building the business case for Nature-based solutions via Decision-Support Software & Citizen Co-Crea-**

Anterola, Jeremy

### **Implementation of an Early Warning System in urban areas: the Badalona study case**

Bofill, Joaquim

### **Integrated climate services to validate real-time adaptation planning and operation**

Gaitán, Emma

### **Developing a novel DSS to support Adaptation Planning and Decision-Making under Uncertainty: Insights from the Caribbean to the Western Balkans**

Green, Michael

### **Early Warning Systems (EWS) in Highland Mountainous Communities: Comparing the Effectiveness of Government-Led Versus Community-Led EWS**

Hussain, Mujahid

### **A4EU: The ANYWHERE Platform to manage risk in real-time**

Llort, Xavier

**Wednesday 21**

# Parallel session

## Flood resilience in urban areas

**Chair:** Pregnolato, Maria

**Keywords:** Flooding, resilience, drainage, urban areas

Flood risk in urban areas is one of the main threats of climate change. In this context, several solutions are being developed to increase the flood resilience of cities, such as surface drainage systems or intelligent real-time flood control and warning systems. This session will present some innovative approaches and solutions to make cities more resilient to floods.

Wednesday 21

9.00-10.30

Room 1

### **Intelligent real-time flood control and warning system in flood parks**

Balaguer, Miguel

### **Potential flood mitigation benefits of a CAM green roof in Mediterranean urban areas**

Cristiano, Elena

### **Strengthening Urban Resilience to Flooding in Yangon using Sustainable Urban Drainage Systems (SUDS)**

Davies, Christopher

### **The relevance of surface drainage systems in the flood resilience of our city**

Gómez, Manuel

### **Barcelona Urban Drainage Master Plan**

Ortiz, Alejandro

### **Monitoring Combined Sewer Overflows in Consorci Besòs Tordera Under Spanish Royal Legislative Decree 1290/2012 Framework**

Téllez-Álvarez, Jackson

# Parallel session

## Co-production of knowledge for more equitable and effective adaptation

**Chair:** Fourniere, Helene

**Keywords:** Co-production, knowledge, engagement, stakeholders

Climate change adaptation and urban resilience challenges require the co-production of knowledge between different scientific fields. Research, policy and funding institutions demand research collaboration across disciplines, and connecting science with society. In this regard, this session explores innovative approaches to bridging knowledge gaps, as well as citizens' engagement initiatives.

Wednesday 21

9.00-10.30

Room 2

### **Cultivating systemic practices as an approach to bridge knowledge - implementation gaps in urban resilience: IURA Summer School as case study**

Angheloiu, Corina

### **Place-based citizen science for assessing risk perception and coping capacity of households affected by water-related hazards**

Barros Ramalho Alvez, Priscila

### **Urban hazard and risk profiling through city information modelling and integrated emergency lifecycle management with real time participatory approaches**

Madhav Maroju, Venu

### **Co-production of knowledge and climate change adaption solutions. The case study of Badalona in BINGO project**

Martínez-Puentes, Montse

### **Building resilience through co-creation in water infrastructure projects in the Netherlands**

Radulescu, Maria Alina

# Parallel session

## Climate & energy

**Chair:** Domínguez, José Luis

**Keywords:** Energy sector, climate impacts, electrical failure, circular cities

Energy plays an important role in many aspects of our lives. Changes in temperature, precipitation, sea level, and the frequency and severity of extreme events will affect how much energy is produced, delivered, and consumed. This session presents some works about the analysis of climate impacts on energy sector as well as climate performance of sustainable adaptation & mitigation strategies.

Wednesday 21

9.00-10.30

Room 3

### **Circular Urban Systems: Towards a new concept for urban planning and design**

Hubmann, Georg

### **Urban Resilient-Positive Energy Districts: insights for a user-centric design approach**

Luque Segura, Iván

### **Electrical grid assessment against flooding by mean of probabilistic GIS-based processes**

Sánchez Muñoz, Daniel

### **How to incorporate new challenges and RESCCUE methodology into energy sector?**

Silva, Inés

# Parallel session

## Governance: The strenght of cities (to improve resilience)

**Chair:** Naranjo, Aytor

**Keywords:** Urban governance, resilience action plans

For decades, there was only one way to manage risks: bigger and stronger infrastructures. More recently, nature-based solutions (NBS) proposed a paradigm change, by using natural solutions that avoid transferring risks downstream, being able to solve the problems where they are generated. These changes proposed by the implementation of NBS were for quite some time only at a theoretical level, but nowadays, more and more actual implementations are being built everywhere. This session presents at a practical and theoretical levels, the benefits of different types of NBS in completely different urban areas.

Wednesday 21

9.00-10.30

Room 4

### **Following a step by step development of a Resilience Action Plan**

Cardoso, Maria Adriana

### **How can Urban Open Spaces enhance city resilience? A proposed conceptual framework and evidences from Barcelona**

Chelleri, Lorenzo

### **Theory of spatial planning and flood risk management: A systemic approach to the flood resiliency assessment. Barcelona and Taipei case studies**

Hu, Fang-yu

### **Adaptation strategies in Mid-Sized French Cities: The role of local authorities (in a centralized country) in addressing the global issue of Climate Change**

Khamis, Rim

### **Designing urban transition pathways towards SDG 11 and 13 through Systems Dynamics and lessons from Germany's sustainable city framework**

Santos, Tieza Mica

### **The case of VenetoADAPT project as example to develop local adaptation strategies integrated with mitigation in a multi-level governance approach**

Vicentini, Giovanni

## Parallel session

# Nature-based solutions in cities: The key for climate change adaptation and increasing resilience

**Chair:** Martínez, Montse

**Keywords:** Nature-based solutions, impacts, green roofs, benefits

Urban governance has gained a central role globally; this session will showcase different examples of cities such as Paris or Barcelona, which are largely exposed to risks and vulnerabilities, while at the same time they are also key to unlocking sustainable and resilient urban development. The session will explore how build up urban governance facilitate to come up with strategies and action plans for solving communities' problems and keep them running smoothly.

Wednesday 21

11.00-12.30

Room 1

### **Integrated, co-created NBS for liveable and resilient cities, from design to maintenance**

Aivalioti, Sofia

### **Assessing the environmental and socio-economic benefits of green urban drainage infrastructure**

Locatelli, Luca

### **Exploring the Role of Urban Green Space in Mitigating and Adapting African Cities for Urban Heat Island Effects are presenting**

Niiru, Esther Bárbara

### **Wet weather treatment lines as an adaptation measure for climate change events in Lisbon, Portugal**

Pimentel, Nuno

### **Sustainable urban design strategies for water security and social empowerment in the hillsides of Lima, Peru**

Zúñiga Arbildo, Jorge

## Parallel session

# New perspectives on citizen engagement for urban resilience

**Chair:** Gabàs, Ares

**Keywords:** Citizen-generated data, engagement, serious gaming, science-based solutions

Nowadays, cities are facing several challenges posed by climate change that they have not faced before. In this context, citizens, who are the most affected by these threats, are vulnerable to climate-related impacts. Citizens' engagement and the use of citizen-generated data is key to ensure a proper adaptation of cities to climate change. This session will explore new perspectives and innovative solutions on citizen engagement to ensure the success of adaptation measures in cities.

Wednesday 21

11.00-12.30

Room 2

### **Collaborative Project REKMA “Resilience beyond Emergency”: experiences, challenges and actions after the earthquake in Tochimilco, Mexico**

Durán-Díaz, Pamela

### **Barcelona's coproduced climate action**

González, Andoni

### **Enhancing the Pedestrians' Experience in Espana Boulevard through an Adaptive Climate Strategy - A Socio-Economic Study of the Sampaloc Skywalk**

Herrera, Henry Felix E. and Tejuco, Felicísimo JR. A.

### **From a holistic urban resilience methodology to implementation on the field by the use of innovative tools**

Lieken, Els

### **Geo-localised citizen-generated data for urban resilience: a dynamic data stream clustering approach using Natural Language Processing tools**

Santucci, Valentino

### **Dike or Die? Prevail! – Designing a serious game about multi-benefit coastal protection in Denmark**

Wieszczeczynska, Katarzyna

# Parallel session

## Water & climate change: Challenges and solutions

**Chair:** Bernat, Xavier

**Keywords:** Water, scarcity, rainfall, climate change

Urban services are key for the proper functioning of a city: without water, energy or transport, citizens can't live their normal lives and thus, economic and social activities are disrupted. Due to the concentration of population and complexity of cities, urban services are already working at high levels of stress, and climate change may increase the pressures on those systems. This is of special relevance when it comes to the water sector, as water scarcity, extreme rainfall or water quality problems may add stresses to the water and waste water networks of cities. This session presents challenges and solutions related to the urban water systems from cities all around the world.

Wednesday 21

11.00-12.30

Room 3

### **Achieving urban water supply and flood resilience using catchment scale rainwater management**

Alihan, Sangaralingam

### **Urban resilience diagnosis in context of climate change in Benidorm (Spain)**

Balaguer, Miguel

### **Assessing water related challenges in the wider resilience context: lessons from Asunción, Paraguay**

Celaya, Amaya

### **Modelling future water availability for the city of Barcelona**

Forero-Ortiz, Edwar

### **Multi-temporal built-up grids of Brazilian cities: how trends and dynamic modelling could help on resilience challenges?**

Rufino, Iana

## Parallel session

# Strategies, measures and indicators for effective adaptation of cities

**Chair:** Brito, Rita

**Keywords:** Adaptation strategies, prioritization, indicators, urban resilience

There are different adaptation measures and strategies to increase the cities' resilience. To assess and decide what adaptation measures to use, decision makers need to know what strategies exist, which are relevant for their system and finally, how effective are these measures. This session will present innovative prioritization methods, new approaches on indicators for urban resilience and will showcase some examples of the implementation of adaptation strategies in cities.

Wednesday 21

11.00-12.30

Room 4

### **Determining the indicators for urban climate resilience: Case of Denizli**

Aygün, Aygun

### **Identifying and modelling interdependencies and cascading failures between critical urban services: Hazur approach within a state of the art**

Bocquentin, Marie

### **The key elements of urban resilience: an analysis in 13,000 cities worldwide**

Cançado, Danilo

### **Urban leaders capacity building on nature-based solutions in the Interreg 2 Seas region: pilots as triggers to raising awareness**

De Klerck, Patrick

### **Prioritization of adaptation strategies: methodology and application**

Guerrero, María

### **The key factors in the Lisbon path for resilience in RESCCUE**

Telhado, Maria J.

# **Closing plenary**

## **Next steps on urban resilience: Goals and challenges**

**Chair:** Velasco, Marc

During the last two days, the Urban Resilience in a context of Climate Change conference (URCC) tried to provide a space to facilitate dialogue among a diverse range of actors from academia, governments, businesses and communities on the multiple aspects of urban resilience and climate change. During these two days, the key challenges and solutions for cities have been presented and discussed, while promoting the communication and knowledge exchange between researchers, policymakers and practitioners in order to find integrated solutions and inspire action.

In this closing plenary, we will take advantage of the expertise and views of some URCC delegates, including presenters, session conveners and regular attendees, managing to capture all the debates and points of view that occurred during the conference. In this context, a round table discussion will be carried out, mainly focusing on the next steps related to urban resilience, discussing future goals and challenges to overcome.

**Wednesday 21**

**12.30-13.30**

**Room Plenary**

## Speakers | Closing plenary



### **Youssef Diab | EIVP**

Youssef Diab is a Professor of Urban Sustainable Planning in the University Gustave Eiffel – Formerly Paris Est) in France. He is also the Scientific Director of the EIVP: Ecole des Ingénieurs de la Ville de Paris, dedicated to urban and municipal engineering. This school is attached to the city of Paris and affiliated to the University Gustave Eiffel. His research and teaching activities are related to the field of civil and environmental, resilience and energy engineering and the relations with urban and regional planning. Most of his research is done in co-operation with municipalities and local authorities, especially the city of Paris. He is collaborating with urban utilities companies and international donors especially in developing countries of the Mediterranean Basin, Arab countries and Asia.



### **Ares Gabàs | Ajuntament de Barcelona**

Ares Gabàs has been Head of the Resilience Department, which is under the Infrastructure and Urban Coordination Management of the Barcelona City Council, since November 2013. She is currently responsible for the development of the resilience strategy and project implementation carried out through the Resilience Boards (TISU). She has a background in architecture and public space design, and she has been working for the municipality of Barcelona since 2006. Before joining the Resilience Programme in September 2012, she worked in the 22@ District Transformation Project, an integrative urban renewal process of the former industrial area of Barcelona.



### **Lorenzo Chelleri | Urban Resilience research Network (URNet)**

Lorenzo Chelleri is the Chair of the Urban Resilience Research Network (URNet) and Director of the Int. Msc. Degree in City Resilience Design and Management, at the International University of Catalonia (UIC Barcelona). With a background in urban and regional planning and a Ph.D. in Urban Geography, his research currently focuses on the interplay between urban sustainability and resilience. After having worked for the European Environment Agency (EEA), and been involved in several European Projects, he published both theoretical and empirical research papers in leading journals, contributing to the development and advances of urban resilience theory. He developed consultancy and research activities across Mexico, Bolivia, Morocco, Europe and Asian cities.



### **Rita Salgado Brito | LNEC (Laboratório Nacional de Engenharia Civil)**

Rita Salgado Brito is an Assistant Researcher in the Portuguese National Laboratory for Civil Engineering (LNEC), in the Urban Water Division (NES) within the Hydraulics and Environment Department (DHA). She is a PhD in Civil Engineering and has more than 20 years of experience in infrastructure asset management, urban drainage systems, monitoring of hydraulic and water quality parameters, hydraulic modelling of drainage systems and condition assessment. She has been a partner of the RESCCUE project, working mostly in city and services resilience assessment to climate change and resilience action plans. She is currently the Chair of the IWA Strategic Asset Management Specialist Group.



### **Àngel Villanueva | Aquatec-SUEZ Advanced Solutions**

Àngel Villanueva is a civil engineer, Director of Urban Water department at Aquatec-SUEZ Advanced Solutions, specialising in hydraulics and infrastructure. With 7 years of experience in consultancy, he led hydraulic projects focusing on water production and distribution systems, wastewater and drainage sewer systems, rivers and rural catchments, irrigation and regulation basins; and 14 years at CLABSA, where he was the chief of the Projects & Planning Department, leading projects in the Barcelona area. In addition, he was in charge of city sewer system and pneumatic waste collection master plans.

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