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WATER FORUM
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Resilient Cities and Urban Water Systems

Advancing Urban Flood Risk Assessment and Disaster Resilience in the Mediterranean

UNESCO Intergovernmental Hydrological Programme (IHP)

Euro-Mediterranean Water Forum 2026 · 29 September – 2 October · La Nuvola, Rome

KEY INFORMATION

Date	29 September 2026
Time	11:30 – 13:00
Room	Room Bosforo
Format	Presentations followed by a panel discussion & an interactive session
Language(s)	English [no interpretation]

SUMMARY

Bringing together advanced flood risk assessment methodologies (hydraulic modelling, monitoring, vulnerability mapping) with innovative solutions such as nature-based solutions (NbS), water-sensitive urban planning and design, sustainable drainage systems (SuDS), and smart technologies, this Special Session discusses how Mediterranean cities can build urban water resilience—transforming vulnerable zones into resilient ecosystems, while embedding these strategies into national climate policies.

AGENDA & SPEAKERS

Time	Speaker Name & Title	Organization	Role / Topic
Moderator: **Dr Sarantuyaa Zandaryaa,** Division of Water Sciences - Intergovernmental Hydrological Programme (IHP), UNESCO			
11:30 – 11:40	**Opening remarks**	UNESCO & Sapienza University, Italy	***Opening speakers*** • **Abou Amani,** Director, Division of Water Sciences - Intergovernmental Hydrological Programme (IHP), UNESCO (TBC) • **Francesco Napolitano**, Sapienza University, Italy
11:40 – 12:10	**Presentations**		

Time	Speaker Name & Title	Organization	Role / Topic
	Framing presentation UNESCO IHP: Promoting science, innovative solutions and capacity building for climate-resilient urban water management	UNESCO	**Dr Sarantuyaa Zandaryaa,** Intergovernmental Hydrological Programme (IHP), UNESCO
	SAPIENZA: When people meet floods: time-varying population exposure to urban pluvial flooding in Rome, Italy	Sapienza Univ. of Rome, Italy	**Dr Elena Ridolfi,** Sapienza University, Italy
	UNESCO Project: Strengthening capacities for sustainable urban water management in the Balkans	Aristotle University of Thessaloniki (AUTh), Greece	**Prof Elpida Kolokytha**, Director, Center for Integrated and Multidisciplinary Water Resources Management (CIMWRM), under the auspices of UNESCO, Greece
12:10 – 12:40	**Panel Discussion** Advancing Urban Flood Risk Assessment and Disaster Resilience in the Mediterranean		***Panel speakers:*** • **Marco Casini**, Secretary General of the Central Apennines Basin Authority (AUBAC), Italy • **Stefano Guarino**, Director of the Department for Urban Security, Civil Protection, and Legality, Capital City of Rome, Italy • **Fabio Russo**, Sapienza University, Italy • **Francesco Napolitano**, Sapienza University, Italy
12:40-12:50	**Q&A: Interactive session with participants**		
12:50 – 13:00	**Closing: Key points from the discussions**	UNESCO	Moderator

BACKGROUND & RATIONALE

The Mediterranean region is a recognized climate change hotspot. Rapid, dense urbanization combined with increasingly intense, unpredictable convective storms has turned Mediterranean cities into hotspots of frequent water-related disasters with devastating effects on water systems, infrastructure and properties. Flash floods, pluvial flooding, and infrastructure overloads now pose existential threats to urban economies, public safety, and critical assets.

Traditionally, urban water management has relied on grey infrastructure designed for historical baselines. However, under accelerated climate change and hydrological cycle alterations, these legacy water systems may fail. To effectively respond to climate change impacts, cities need robust and resilient urban water systems that combine grey infrastructure with other innovative approaches—such as green infrastructure and adaptive management strategies—that enhance resilience and enable urban water systems to adapt to changing conditions.

Building urban water resilience, hence, requires a paradigm shift from reactive crisis management to proactive risk assessment and adaptive, water-sensitive urban design.

This session addresses the urgent need to integrate advanced flood risk assessment methodologies into the fabric of urban planning, by leveraging hydraulic modeling, high-resolution monitoring, and vulnerability mapping. By combining cutting-edge risk science with Nature-Based Solutions (NbS), Sustainable Drainage Systems (SuDS), and smart technologies, Mediterranean municipalities can transform their urban landscapes from vulnerable runoff zones into resilient, water-adapted ecosystems.

Furthermore, the session discusses the importance of policy integration to translate these approaches into practice by incorporating urban water related hazards, risks, and solutions into national climate policies.

OBJECTIVES

The session aims to:

1) Bridge the science-policy gap in risk assessment: Demonstrate how advanced flood risk modeling and hazard mapping can be practically integrated into municipal master plans and zoning laws.

2) Showcase urban scalable innovations: Highlight successful Mediterranean case studies featuring Sustainable Drainage Systems (SuDS), "sponge city" concepts, water-sensitive urban planning, and AI-driven urban flash-flood early warning networks.

3) Enhance disaster preparedness & governance: Break down silos between academic researchers, civil protection agencies, municipal planners, and water utilities to build a unified defense against urban water disasters.

4) Promote integration of urban water related hazards, risks and solutions into national climate policies.

TARGET AUDIENCE

This session is tailor-made for municipal urban planners, basin authority representatives, civil protection and disaster risk management (DRM) specialists, water utility directors, climate adaptation scientists, water professionals, and international financial institutions.

EXPECTED OUTCOMES

1. Urban resilience brief: a practical document with examples of best practices for integrating flood risk assessments into Mediterranean municipal/urban areas.

2. Strategic network building: strengthening institutional collaborations between risk scientists and city managers to co-design future adaptation projects under Horizon Europe or Interreg Euro-MED frameworks.