

WATER FUTURES

Joint Exhibition with Works by Architecture Students

**from the design studio of Prof. Francis Kéré, TU Munich
and the research seminar of Prof. Sascha Roesler, USI Mendrisio**

The WATER FUTURES exhibition explores the potential of water not only as a physical substance, but also as a medium that shapes and is shaped by the urban and architectural imagination. In our time, there is an undeniable urgency to address water as more than just a commodity. Issues such as the privatisation of resources, scarcity, contamination and large-scale extractive practices make this engagement critical and urgent. Yet, water also continues to serve as a generative force - promoting health, care and collective action. To address these challenges, water pedagogies in architectural education must embrace water's dual character: as a site of crisis and as a source of creativity, community and resilience.

The joint travelling exhibition of two chairs from the Technical University Munich (Germany) and the Accademia di Architettura in Mendrisio (Switzerland) presents student projects on the theme of WATER FUTURES. It highlights the project outcomes of the design studios of the Chair of Architectural Design and Participation headed by Prof. Francis Kéré (2022-2024) and the results of a research seminar of the Chair of Theory of Urbanization and Urban Environments under the direction of Prof. Sascha Roesler (2023). The exhibition builds multiple bridges between architectural design and research, while addressing the pressing global water challenges that are exacerbated by climate change.

The Chair of Architecture Design and Participation projects emphasised contextual sensitivity and encouraged students to develop site-specific solutions through a mix of conceptual thinking and hands-on experimentation. Over the past six semesters, students have addressed water challenges at a variety of scales and design programmes. These range from elements to buildings, from devices to landscape masterplans, with a focus on unconventional water sources and resilient architecture.

Namely, projects from the design briefs COLLECTRA[SH], FOODTOPIA, [SUP]PORT and WATER EVER showcase creative interventions from around the world, that address local issues such as flooding, drought, pollution, local resource availability, biodiversity, passive systems and underline the need for spaces that benefit local communities while proposing sustainable systems for water harvesting and use. The projects point to possible directions for the future of architecture when faced with water-related challenges.

The content of the exhibition is part of the core body of work of the Chair, whose mission is based on the work of Francis Kéré. Kéré's projects acknowledge the importance of water in architecture. They explore the potential of natural resources, particularly water, as both a source of life and a vital resource for the community.

The works by the Chair of Theory of Urbanization and Urban Environment's research seminar focused on the future impact of rising sea levels on the (urban) coastal environment, urging students to combine scientific knowledge with architectural foresight. The seminar emphasized the need for future-oriented competence of architects; it equipped the students with tools to anticipate and adapt to ecological changes. The students explored the future of cities through interdisciplinary approaches, incorporating sociological, technological and political insights to promote resilient infrastructure and urban planning strategies for a series of case studies worldwide.

Combining the site-specific projects with real-scale components by the Chair of Architectural Design and Participation with the research-based scenarios by the Chair of Theory of Urbanization and Urban Environment seminar, this touring exhibition presents an integrated view of how architecture and urbanism can address the multiple challenges of climate change. The works on display emphasise the importance of collaborative, interdisciplinary efforts to design a resilient way forward for our water-affected landscapes.

MUNICH

Venue: Pavillon 333, TU Munich
Date: 17.12.2024 - 12.01.2025

ZURICH

Venue: ZAZ Bellerive - Zentrum Architektur, Zurich
Date: 06.06.2025 - 10.08.2025

Curated by

TUM: Alberto Pottenghi and Alida von Boch
USI: Prof. Sascha Roesler, Silvia Balzan, Noa Levin, Lydia Xynogala

WATER EVER

Designing with Water Challenges at its Core

Curated by
Alberto Pottenghi and Alida von Boch

WATER EVER is about designing with water challenges at its core, such as sponge designs, rainwater harvesting and proposing social water structures. The increase of extreme conditions related to water in different contexts, such as drought or floods, and their geographical, social and economic consequences display the vulnerability of our living and building environments. The studio's brief gave students the opportunity to investigate water challenges as the focus of experimental typologies at different scales in specific locations.

Each group focused on a specific water-related issue, either water scarcity or flooding or both, depending on the season, in places that they had a personal connection to or a strong research interest. Each design task arose from the challenge of collecting, storing and managing water according to the chosen location and situation. Students have researched reference projects that harvested rainwater, fog or dew, greening strategies in dry areas as well as sponge city designs. All projects explored an intrinsic integration of water into architecture as a resource for the community. In a complementary lecture series, various talks provided insights into the topic of water in relation to urban, territorial or architectural design challenges.

There were three interconnected phases - a research phase, a participation phase and a design phase. The projects were developed at different scales (S, M, L): an element scale, a building scale and an urban/landscape scale. Students have researched climatic, social and cultural conditions, water typologies, building techniques and infrastructures, and contacted members of the local communities to gain insight into the specific issues and develop specific design projects from landscape and urban scale to 1:1 experiments.

The Chair of Architectural Design and Participation's projects develop an awareness of contextual factors from which invention can emerge. Conceptual thinking is combined with a practical approach to site-specific solutions. Understanding the needs of the community we are designing for is key to developing a strong program that is tailored to the specifics of the site.

Head of Chair: Prof. Francis Kéré
Teaching Team: Alberto Pottenghi, Dr. Inês Dantas, Barbara Schudok,
Alida von Boch, Jerome Byron
Teaching Support: Dominic Nocon, Lluís Dura
Team Assistant: Anja Böckl
Structural Consultation: Prof. Pierluigi Acunto, Professorship of Structural Design Team
Lecture Series: COLLECTRA[SH]: Thiresh Govender, Julia King, Jan Kattein, David Barragán
FOODTOPIA: Senthold Asseng, CJ Lim, Ranka Junge, Ferdinand Ludwig
WATER EVER Luca Astorri, Prof. Regine Keller, Henry Glogau
Acknowledgements: Kevin Chen, Claudia Melchor

Students

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Emma Ripollés

Rebecca Ruggerini

Sophie Steggemann

Maria Pia Totaro

Giacomo Torcoletti

Darko Tushev

Patrick Walter

Quentin Wiesmath

Johanna Zucker

URBAN FUTURES

Rethinking Architecture and Infrastructure in View of Rising Seas

Curated by

Prof. Sascha Roesler, Silvia Balzan, Noa Levin, Lydia Xynogala

Many of the world's megacities and densely populated areas are located in coastal areas, which are particularly susceptible to flooding and rising sea levels. According to current scientific forecasts, sea levels will rise by 30 centimetres to one meter by 2100, depending on how much CO₂ continues to be emitted. If the 1.5-degree climate target is achieved, the world's oceans could probably rise by up to two to six meters in the coming centuries. How would such a rise in sea levels affect existing coastal urban structures and what infrastructural and architectural measures are possible?

The research seminar for Master students in the Fall Semester 2023 focused on how architects can address the ecological shifts to come and the implications of challenges such as rising seas for architecture, infrastructure, and urbanization. During the seminar, future challenges of architectural design, infrastructure construction, and urban development were discussed in light of the expected rising sea level, which will threaten numerous cities and ecosystems. What strategies and scenarios can architectural design embrace to respond to this threat? Students were introduced to the practice of research in architecture, working in small groups to develop their research projects on the given topic, which culminated in final papers and the posters exhibited here.

Nowadays, future thinking literacy must be part of an effective skillset of architects and urban designers. They require methods and tools to translate predictions on the future into urban design measures. Although architecture is a future-oriented practice, little effort has been made to systematize the approaches to "futuring" in design practice and to critically reflect them in the field of architectural theory. Following Donna Haraway's idea that "scientific facts and speculative fabulations need each other," urban future scenarios should be informed by scientific knowledge. Thus, the seminar asked students to challenge themselves by considering the interdisciplinary character of today's architectural design practice, which must consider science and technology, sociology and policy insights.

Students

Nadine Bein

Téo Belgeri

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Stefan Costache

Giacomo Dini

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Silvester Fornasari

Sophie-Charlotte Frehse

Kim Josée Colette Gubbini

Antonia Roberta Herting

Wen-Ting Hsieh

Loïc William Janet

Sofia Karamysheva

Hadiseh Karimi

Jasmin Mohammadi

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