

📍 Sam Neua, Laos; Kratié, Cambodia; Sleman, Indonesia

## PolyUrbanWaters

### Polycentric approaches to the management of urban water resources in Southeast Asia

PolyUrbWaters supports three exemplary pilot cities in Southeast Asia in shaping a water-sensitive transformation in line with the localisation of the 2030 Agenda. Water is anchored as a cross-cutting issue of urban development, water-relevant services of general interest are improved and resilience to climate change is strengthened. The activities range from field research to the promotion of sustainable capacities.

#### Project Objectives

The PolyUrbWaters project aims to provide innovative and transferable instruments that support a water-sensitive, sustainable and climate-resilient transformation of cities in Southeast Asia and a localisation of the 2030 Agenda. The practice-oriented instruments are developed in concrete contexts of representative partner cities and aim to ensure effective water-related municipal services of general interest for all citizens, to counteract the increasing pressure on urban water resources and to mitigate threats exacerbated by climate change. Polycentric approaches to water-sensitive infrastructure development and to urban water resource management cover the dimensions of urban planning, technological solutions, financing and co-productive governance structures at the municipal or city level. BORDA e.V. is in charge of the project.

#### Challenges

Southeast Asian cities are challenged to find new ways to strengthen their resilience, inclusion and comprehensive water resource security. In view of urban development dynamics, climate change and limited financial and institutional capacities, classical models of urban planning and the development of water infrastructure are reaching their limits. Gaps in the supply of water-related municipal services of general interest, vulnerabilities in extreme weather events and the overuse of natural resources are becoming increasingly apparent. There is a need for the integrated development of blue, green and grey infrastructures, which are polycentrically combined in a situation-appropriate and site-specific manner, especially with regard to their sustainable management. Therefore »water« should be anchored across sectors as a cross-cutting issue of urban development planning, especially in its multiple governance dimensions.

**Addressed Sustainable  
Development Goals  
of the United Nations**





**Residential housing in the valley of Sam Neua.** Image provided by PolyurbanWaters

## Research Approach and Methods

PolyUrbWaters is a transdisciplinary research collaboration with partners from science, civic institutions, city administrations, government institutions and practice partners, focusing on water-sensitive urban planning and infrastructure, sustainable municipal services of general interest, climate adaptation and integrated land and water resource management. The »LivingLabs« are located in Sam Neua (Laos), Sleman (Indonesia) and Kratie (Cambodia). These cities are representative of Southeast Asian cities with up to 3 million inhabitants. Exploratory and co-production-based research methods are used with a focus on capacity building, the development of practice-oriented instruments and guidelines, and policy dialogue. In addition to regional and multilateral cooperation, the project creates a far-reaching research and learning partnership between the Southeast Asian countries and Germany.

## Focus Topics

- Water-sensitive transformation of urban spaces
- Sustainable water management
- Efficient municipal services of general interest
- Resilience to droughts and floods
- Reliable drinking water and sanitation supply
- Urban quality of life



»AKSANSI takes part in PUW initiatives because AKSANSI believes that only an integrated approach can solve water problems in terms of quality and quantity. Mainly working on ground water protection according to the DEWATS approach, AKSANSI realized that wastewater management plays an important role in a closed water cycle. The integrated approach envisaged in PUW does not only involve communities as beneficiaries but also as actors. Thus, each water and sanitation problem is addressed and solved by different actors without any overlap.«

**Prasetyastuti Puspowardoyo**



## Expected Solutions and Innovations

By developing practice-relevant instruments that take development dynamics as well as institutional, financial and social realities into account, PolyUrbanWaters particularly contributes to the inclusive, sustainable and water-sensitive transformation of secondary and tertiary cities in Southeast Asia. Polycentric solutions in different governance contexts are identified while following the »progressive implementation« principle recommended by the United Nations. These make it possible to specify the concept of »resilience« in a prominent field of urban development. The instruments developed allow urban development actors to initiate and shape holistic and modular water-sensitive transformation processes in the context of urban co-production. The experiences and work results will strengthen the technical and methodological capacities of practice-oriented scientific processes and contribute to the formation of scientific discourse in the regional context.



»The cities of Southeast Asia have developed remarkably in recent decades. Along with the dynamic population growth and the economic growth of the region, citizens in many places have been given access to infrastructure and water-related services of general interest. However, the challenges of developing sustainable and livable cities are all too evident. The project concept was jointly developed based on the experiences and cooperation interest of the Southeast Asian partners and signifies the project's cooperation potential.«

**Dr. Bernd Gutterer**

## Cooperation Partners

### German Partners

- Institute of Technology and Resource Management in the Tropics and Subtropics (ITT), Cologne University of Technology
- Habitat Unit, Technical University of Berlin
- Free Hanseatic City of Bremen
- Hamburg Water
- German Water Partnership

### Southeast Asian Partners

- Asian Institute of Technology, Thailand
- Laos Public Works and Transport Research Institute
- AKSANSI, Yogyakarta, Indonesia
- Cambodian Institute for Urban Studies
- City Alliance: People, Sanitation, Cities
- Environmental Sanitation Cambodia
- Gadjah Mada University, Faculty of Architecture and Urban Planning, Department of Urban Planning und Faculty of Geography
- Our City: A City for All, Solo, Indonesia
- Ministry/Department of Housing and Urban Planning, Laos
- Ministry of Public Works, Indonesia
- United Nations Economic and Social Commission for Asia and the Pacific Water Resources



**Stakeholder Workshop. World Urban Forum 2020.**

Image provided by PolyurbanWaters

**POLYURBAN  
WATERS**

### Project Coordination

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