

First International Conference organized within the framework of  
PolyUrbanWaters Research and Project Network (BMBF 2019-2025)

# POLYURBAN WATERS

**Polycentric management of urban  
waters in fast-growing cities and  
peri-urban areas in Southeast Asia**

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Session:

Global Perspectives on strategic planning tools and methods for sustainable futures

Presentation:

**Challenges, potentials and emerging needs for different tools for  
sustainable urban planning in Sleman/ Indonesia**

**24-25<sup>th</sup>  
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**Online /  
Berlin / Kratie /  
Sleman / Vientiane**



## Presentation outline:

1. Introduction: Urban Transformation In Indonesia And The Need For New Approach;
2. Sdgs, The NUA, SUSTAINABLE URBAN TRANSFORMATION FOR INDONESIA, And POLYURBAN WATERS;
3. Lessons From Sleman;
4. Context And Challenges For The Future;
5. Recommendations For The Future

# 1. Introduction: urban transformation and the need for new approach

1. Our urbanizing, but 'vulnerable' world - urbanization and urban growth is not only demographic trend, but a complex environmental, socio-economic, and cultural transformation;
2. Cities in Southeast Asia, including Indonesia is in the process of rapid urbanization and urban growth;
3. How to capitalized 'opportunities' of urbanization and urban growth: SDGs and the NUA;
4. How to ensure sustainable urban transformation for fast-growing cities in Southeast Asia, including Indonesia: the issues of localizing SDGs and the NUA – Towards Indonesia Emas: 2045, SEA cities in 2030/2045.

## **Note:**

***The current trend of urban planning and design in Indonesia, as well as Southeast Asian cities, are is yet ensure sustainable urban transformation – the need for a new innovative and comprehensive approach – a very challenging era!!!***



# Ensuring sustainable urban transformation for Fast-growing Cities in Southeast ASIA: Indonesia, context and challenges



1. Indonesia: The second rich country in biodiversity (after Brazil), the largest archipelagic country in the world, the 'rings of fire', **environmentally sensitive area** - not to mention the cultural diversity of the people: would be the perfect place for any new innovations;
2. Java: one among the most populated island in the world – **the urban island**;
3. **Demographic bonus**: problems or opportunities?
4. Rapid economic growth: the **sustainability issues**;
5. Decentralization, **local autonomy**, 'direct' democratization: their direct impacts to the welfare of the locals?

## **Notes:**

**Indonesia, Sleman: the perfect case, representing most of Indonesian urbanization phenomena, rapid urban growth in an environmentally sensitive area as well as very dense population.**

## 2. SDGs, the NUA, sustainable urban transformation for Indonesia, and POLYURBANWATERS: the importance of local visions and collaborations

- “...Urban transformation is **not simply changes in a few aspects of urban areas**. Urban transformation is a transition phase that takes longer period of time and it includes a complete transformative aspects of physical, social, and economic and further to governance aspects in urban areas..” **Sustainable urban transformation requires low risks or low adverse impact yet on the other hand optimize the benefits;**
- Sustainable urban transformation needs awareness and willingness from government and stakeholders to lead and to assure urban growth dynamics. **Urban transformation demand efficient and effective good intervention and good governance** - - Mc Cormick, 2012;
- **SDGS and the NUA: Indonesian commitment and localization;**
- “....Managing water has become one of the most significant challenges facing Indonesian cities” – Silver, 2020.

### *Notes:*

**Polyurban Water Approach provide challenges for sustainable urban transformation; new innovations, local contexts, solution oriented, practical, attractive, best practices.**

# Challenges/Benefits of “Polycentric Approaches” for the management of urban water-sensitive development in Sleman

1. Comprehensive: Integrating water issues into urban planning and design strategies;
2. Provide more effective and efficient collaborations among multiple sectors and other stakeholders, both horizontally and vertically;
3. Integration of technical, socio, economic, and cultural parameters in the approach;
4. Offers innovative and appropriate tools and methods to anticipate and plan for current and future urban challenges in a modern, water-sensitive and strategic manner;
5. Strategically linking research, knowledge, and policy making;
6. Provide real exemplary model of water-sensitive development at the village level that could be replicate in other villages.

## ***Notes:***

***How to integrate Polyurban Water approach with SDGs, the NUA, Indonesian context, as well as Sleman vision toward the future – towards a welfare, democratic, and competitive region!***

### 3. LESSONS FROM SLEMAN

#### Problems faced in managing massive urban transformation:

The case of Sleman urbanized areas illustrates the issues of effectiveness of current urban growth approach and instruments.

1. The issues of law enforcement;
2. The need for new innovations in implementing urban growth management instruments;
3. Strengthening intergovernmental cooperation;
4. The need for local leadership and commitment in guiding and directing urban growth.

Urbanization and urban development process in many areas in Indonesia, including Sleman requires strategic, planned, and responsive efforts to improve effective growth management.

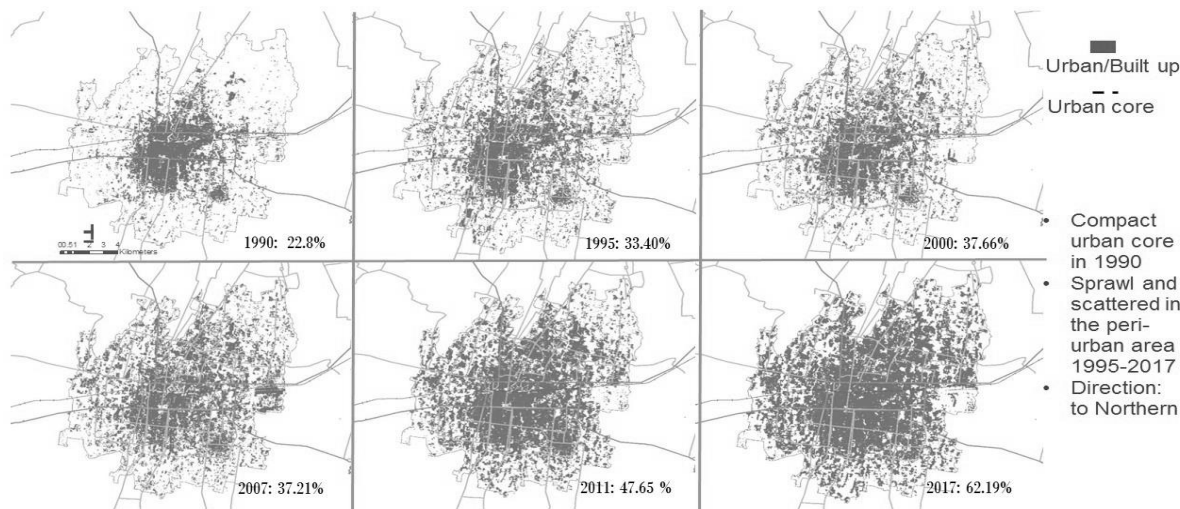
Role of local government as agent of change in achieving sustainable urban transformation become pivotal in this process.

Collaborative strategy is the best option in this dynamic rapid-growth





# Urban Sprawl in the Yogyakarta Urbanized Area from 1990-2017 (Source: Rozano, b & Yan, W 2018): Typical pattern of Indonesian cities: the question of efficiency and environmental conservation!! Sustainable Transformation in Sleman Regency?



The case in Sleman shows that Indonesia has not been completely grasped the opportunity of urbanization as recommended in The New Urban Agenda agreed by international community in 2017, i.e. capitalizing opportunities of urbanization: Socio, economic and environmental problems/risks, resulting from rapid urbanization and urban growth.

*Integrating water issues into landuse planning and design would be a challenge – water sensitive planning, combining local wisdom and new approaches and innovations.*





## 4. Context and challenges for the future in Indonesian cities/SLeman.



1. Rapid urbanization and urban growth;
2. Environmental sensitive areas and disaster prone areas;
3. Rapid economic growths, commercialization/privatization of common resources, particularly land and water;
4. Regional cooperation and the roles of provincial government;
5. Local government capacities;
6. Smart city and regions;
7. New local leaders (Village head and Bupati): New RPJMD/Medium Term Development Planning.

### **Notes:**

- 1) ***Understanding local contexts and dynamics are key for any new innovations and approaches, including 'Polycentric management of urban water'***
- 2) ***Balancing water for livelihood and water as resources seems to be the challenges!!***

# Reinventing Urban Planning and Design for the Community!! The importance of understanding 'formal-informal,' 'planned and organic' 'legal – illegal' urban development processes

## The Planned City

- Master Vision
- Driven by national leadership
- Physical design
- Projection of future



## A City that Plans

- Ongoing, organic processes
- Inclusive, participatory
- Integrates land use with water, infrastructure, employment, culture and natural resources?
- The issues of safe city, resiliency?
- Plan for the future







## 5. Recommendations

- 1) Increasing public/community awareness on water related issues: **children and woman as agents of social changes - ex. Code Sekolah Sungai (River School – Code, Jogja);**
- 2) Mainstreaming water issues into urban planning and design – New courses for planning students/programs; Strategic Environmental Assessment/SEA for City Masterplan and Detail Plan;
- 3) Introducing **new approaches and innovations in balancing water for livelihood and water as resources**: eco-hydraulic, river restoration/naturalization, green infrastructure, water resilient, NRA, sustainable water taxes/charges/pricing, water pollution control, 3R, rain harvesting, SMART city approach;
- 4) The importance of providing **a pilot project/model, best practice – living laboratory**, community-based water sensitive planning providing direct benefits to locals;
- 5) **Developing Regional Polycentric – Collaborative Management Model** - Penta-helix model/approach, involving: 1) citizens; 2) Private sectors; 3) public authorities/government; 4) NGoS/ Civil Society; and 5) Academia – Sleman could be a Model, based on the existing regional cooperation, Jogja Kartamantul;
- 6) Developing “Learning Management System/LMS or Learning Open Platform - **to ensure inclusive learning, long-term commitments, and wider networks.**