WORLD URBAN FORUM

Sustainable Development of Urban Regions

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SCIENCE MEETS POLICY

New approaches for multisectoral collaborations to build urban-rural resilience for sustainable futures

Build4People

Dr Michael Waibel
Hamburg University

Urban Rural Assembly

Dr Li Fan
Prof. Dipl.-Ing. Anke Hagemann
TU Berlin, Habitat Unit

PolyUrbanWaters

Dr Bernd Gutterer
Borda e.V.

IMECOGIP

Dr Harald Zepp
Ruhr University Bochum
Prof. Dr. DONG Nannan
Prof. Dr. GAN Jing
Tongji University

TOSCA

Maria Moleiro
Hafencity University Hamburg
Dr. Azzam Hjouj
Ministry of Local Government of Palestine
Dr. Anas Altartouri
GIZ Palestine

Networking Event

30 June 2022 | Katowice, Poland

12:15 -13:45 | Multifunctional Hall Room 7

Sustainable Development of Urban Regions

Science Meets Policy:

New approaches for multisectoral collaborations to build urban-rural resilience for sustainable futures

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Sustainable Development of Urban Regions

Discussion

- What does urban planning mean when collaborating in a multisectoral environment?
- What can we do to close the implementation gap in sustainable urban development approaches?

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12:15 — Introduction

12:30 — Project Presentations

- Urban Rural Assembly
- Build4People
- Poly Urban Waters
- IMECOGIP
- TOSCA

13:25 — Discussion

Networking


SCIENCE MEETS POLICY
New approaches for multisectoral collaborations to build urban-rural resilience for sustainable futures
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FONA

Sustainable Development of Urban Regions

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Sustainable development of urban regions

Welcome by Dr. Heike Bauer, DLR, Germany

DLR-PT

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Funding measure‘s main objective

The aim of the funding measure is to develop and test locally-adapted strategies for the sustainable development of urban regions and to encourage the strategies' permanent implementation in order to improve ecological factors (emissions, energy and resources efficiency, etc.) and increase urban resilience.

Focus areas of research activities

- Integrated urban planning, e.g. for energy- and resource-efficient buildings, expandable and resilient infrastructure systems and sustainable mobility;
- Reduction of greenhouse gas and pollutant emissions in businesses, private households and transport operations;
- Risk management in extreme weather conditions and natural disasters in rapidly growing cities and their surroundings as well as urban regions.

Funding measure‘s main objective

None of the proposals should lead to isolated solutions. Instead their goals for implementation should be coordinated with and integrated into existing urban development and climate protection plans. Consideration should also be given to the impact of the planned measures on the surroundings (urban-hinterland relations)

A networking and transfer project (facilitation and synthesis research project) will provide scientific and organizational support for the funding measure. Major objectives of the networking and transfer project are to deliver a synthesis of the results and strategies of the projects, support the transfer and application of results, promote project networking and enhance the visibility of the funding measure. This is to enable efficient and smooth communication and cooperation between the funded projects.

Facts and Figures

Definition phase (18 month)

- 5 (out of 19 applications) collaborative projects in China (started 2018)
- 10 (out of 31 applications) collaborative projects in South East Asia (started 2019)

R&D Phase

- 1 Networking and Transfer Project (started 2020)
- 2 collaborative Projects in China (started 2020)
- 8 collaborative projects in South East Asia (started 2021)

Funding provided by BMBF

- approx. 39 m EUR for the first two phases.

Implementation phase (duration 2 years, starting from 2024, budget ?).

Networking and transfer

The implementation of the facilitation and synthesis research project is closely coordinated with the BMBF and the project management agency includes the following specific activities:

- Synthesis of the findings from the funded projects
- Continuous support for learning processes in the funded projects
- Assistance with the processing of results for relevant target groups in the field of sustainable urbanization and with the development of transfer and implementation strategies
- Analysis of the impact of locally implemented results and planning mechanisms, including the development of indicators for impact analysis

- Development of a conceptual framework and establishment of a transfer and demonstration platform for the application of the results
- Scientific and organizational work to promote networking between the funded projects and link them with relevant national and international communities
- Strategy for communicating the results to relevant stakeholders for subsequent implementation

Project Presentations

Urban Rural Assembly

Dr Li Fan
Prof. Dipl.-Ing. Anke Hagemann
TU Berlin, Habitat Unit

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Urban Rural Assembly

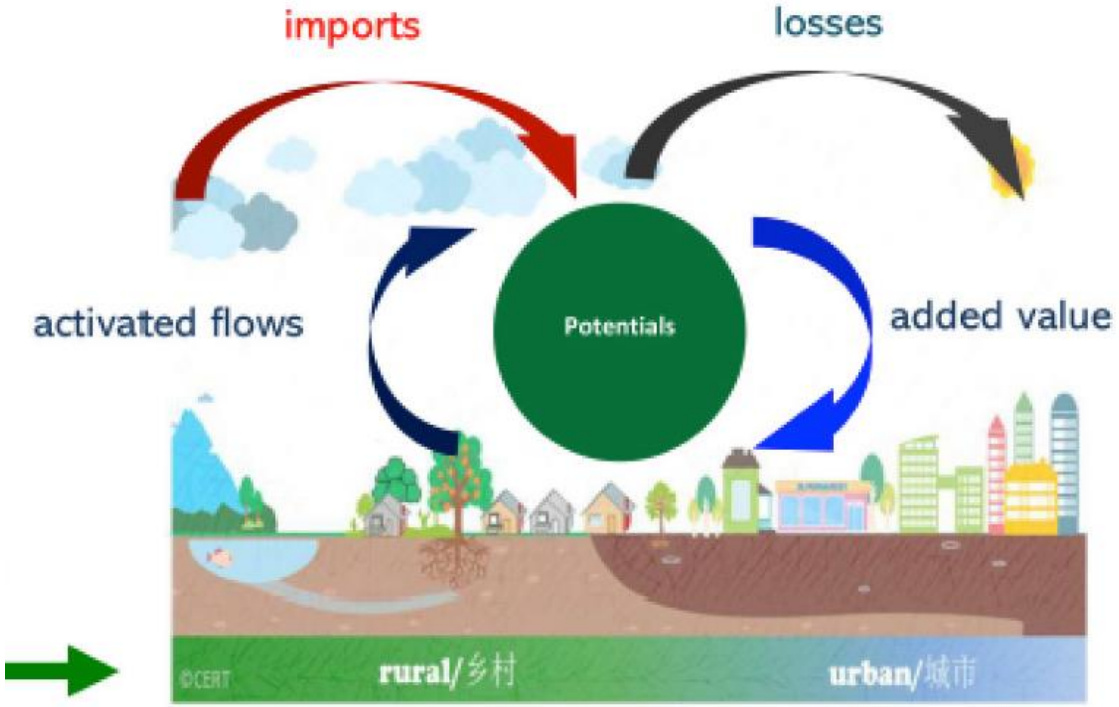
Strategic Tools for Integrated Territorial Planning to Enhance Urban-Rural Integration and Circular Economies in the Taizhou-Huangyan region

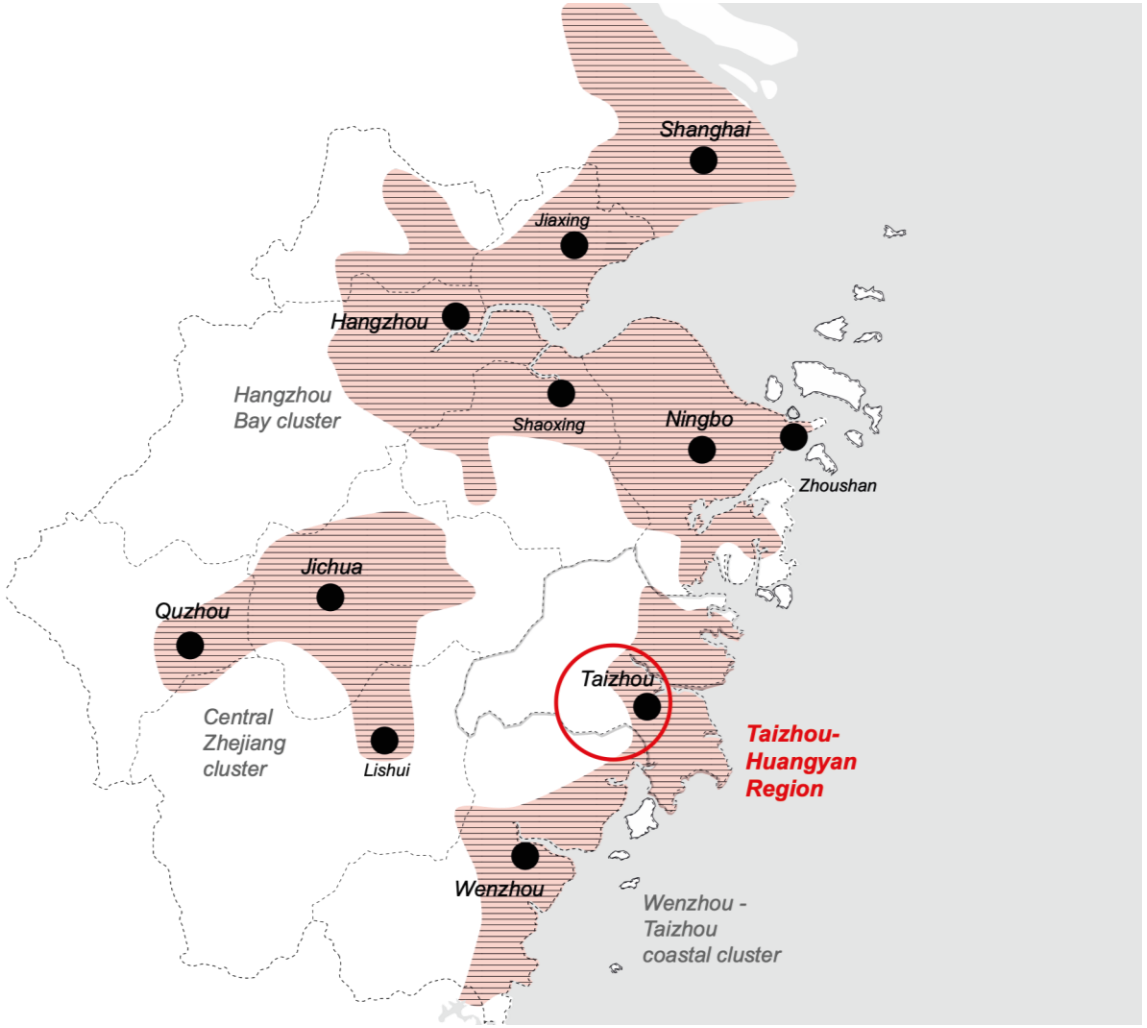
Prof. Dipl.-Ing. Anke Hagemann
Dr Li Fan
TU Berlin, Habitat Unit

Sustainable Development of Urban Regions

Urban Rural Assembly

Strategic Tools for Integrated Territorial Planning to Enhance Urban-Rural Integration and Circular Economies in the Taizhou-Huangyan region





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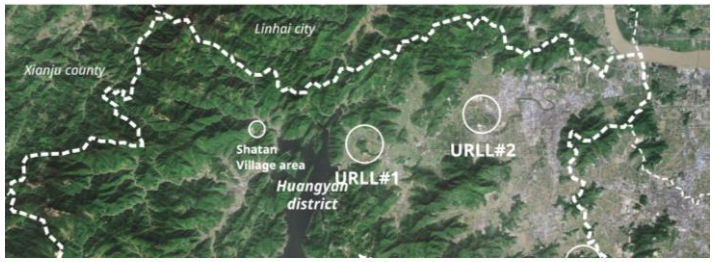
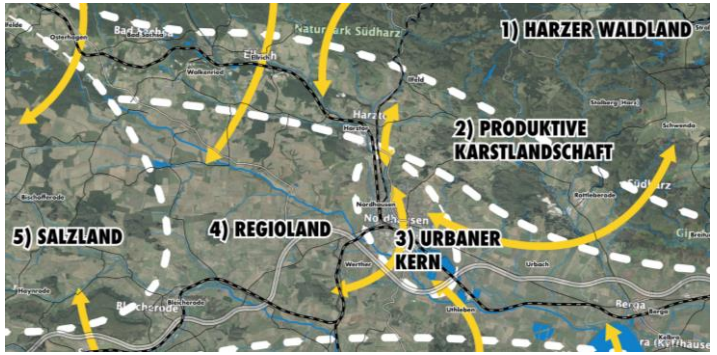
Urban Rural Assembly

Urban-rural living labs as sites for interdisciplinary research and planning





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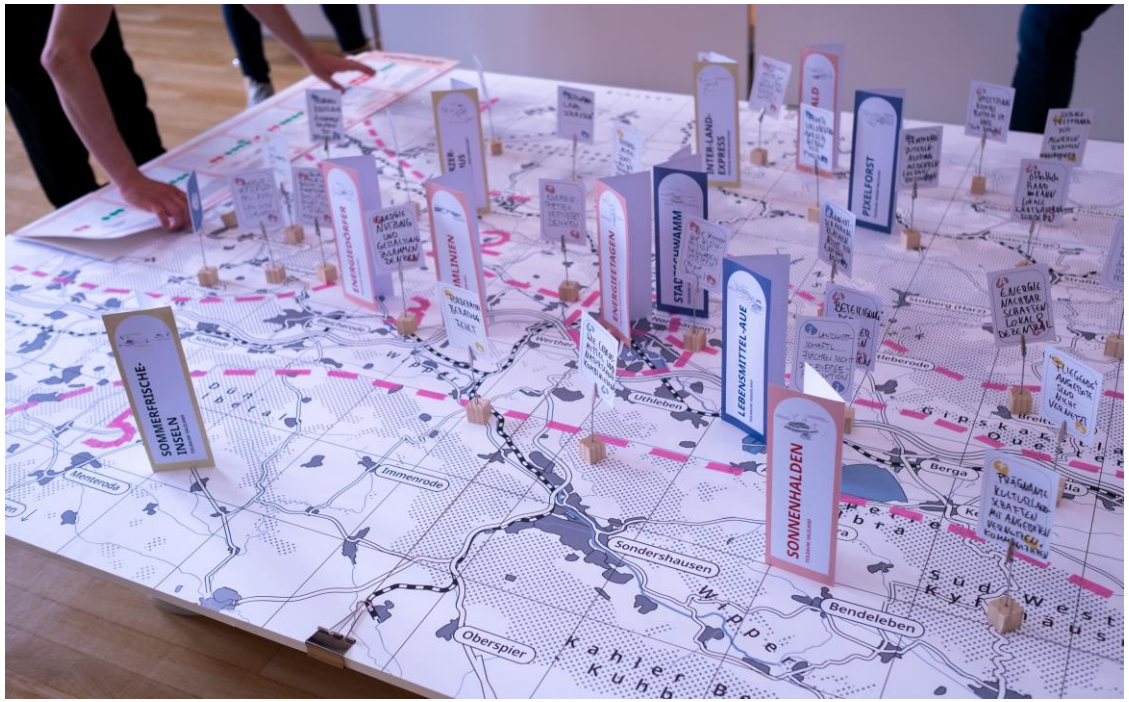
Urban Rural Assembly

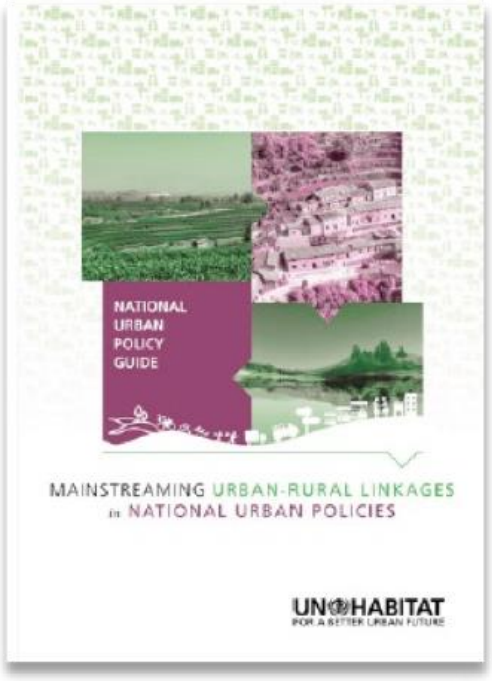
Multiple actor workshops in a transsectoral and multi-level strategic planning process (“Raumbild”)– connecting science and policy

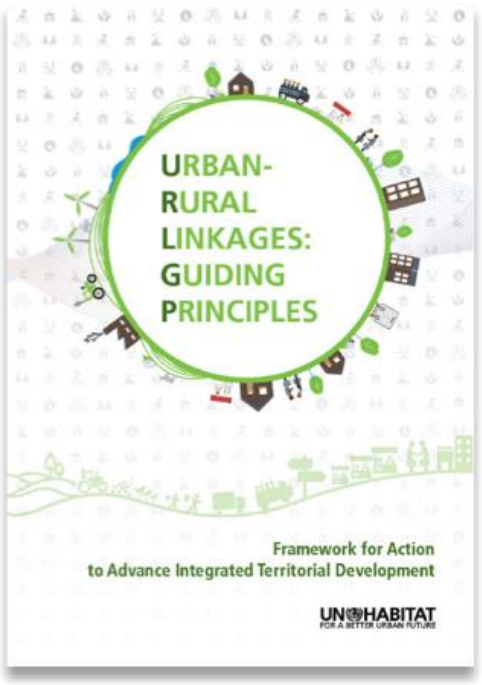


Urban Rural Assembly

Aim:

To develop strategic tools and guiding principles for an integrated urban-rural planning to be adopted by other regions / countries





Un-Habitat: Urban-Rural Linkages Guiding Principles 2017 - ongoing

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Build4People

Dr Michael Waibel
Hamburg University

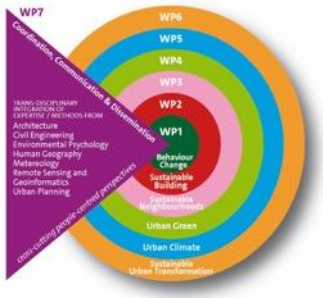
"Business as usual is no longer an option for the building sector".
Mrs. Heike Litzinger, Head of Division, BMZ, during WUF11 Session "Sustainable Construction in Cities", 29 June 2022

https://build4people.org

Sustainable Development of Urban Regions

Build4People Overview

3.17 mill. Euro total funding volume during RD phase (2021-2025)



German Partners

Universität Hamburg
DER FORSCHUNG | DER LEHRE | DER BILDUNG

OTTO VON GUERICKE UNIVERSITÄT MAGDEBURG

TECHNISCHE HOCHSCHULE LÜBECK

INKEK institute for climate and energy strategies

Eberswalde University for Sustainable Development

EBLE MESSERSCHMIDT PARTNER
Architekten und Stadtplaner PartGmbB

Build4People Work Packages

WP1: Behaviour Change

WP2: Sust. Building

WP3: Sust. Neighbourhoods

WP4: Urban Green

WP5: Urban Climate

WP6: Sust. Urb. Transformation

Research Partners

Implementation Partners

CIUS
CAMBODIAN INSTITUTE FOR URBAN STUDIES

Dissemination Partners

EUROCHAM CAMBODIA

META HOUSE PHNOM PENH GOETHE-ZENTRUM KOOPERATIONSPARTNER

GOETHE INSTITUT

Center for Khmer Studies
Centre d'Études Khmères

DGNB
VON ZADOW INTERNATIONAL

UN environment programme

Global Alliance for Buildings and Construction

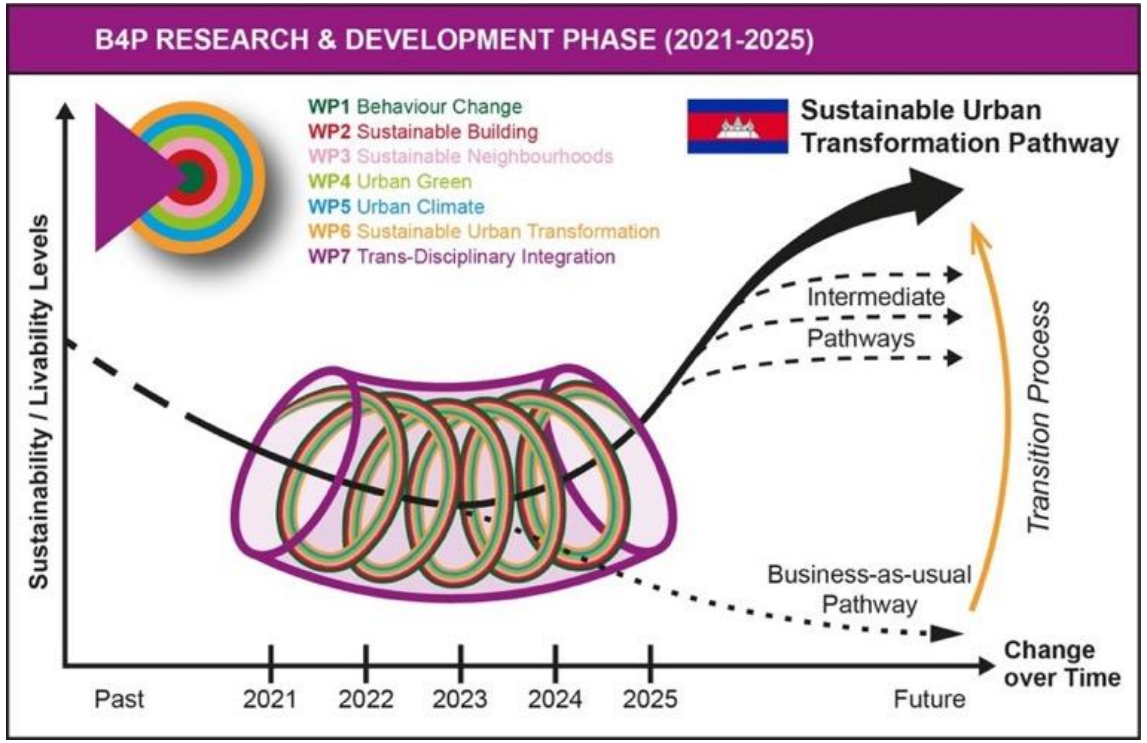
iea

https://build4people.org

Build4People Principles

- ✓ Systemic approach to support a transition process
- ✓ People-led
- ✓ Cross-cutting
- ✓ Trans-disciplinary
- ✓ Action research

"Sustainable Urban Transformation is not only a technological challenge but also a social, cultural, economic and political one". (Rohracher, 2001; Rink et al., 2018)

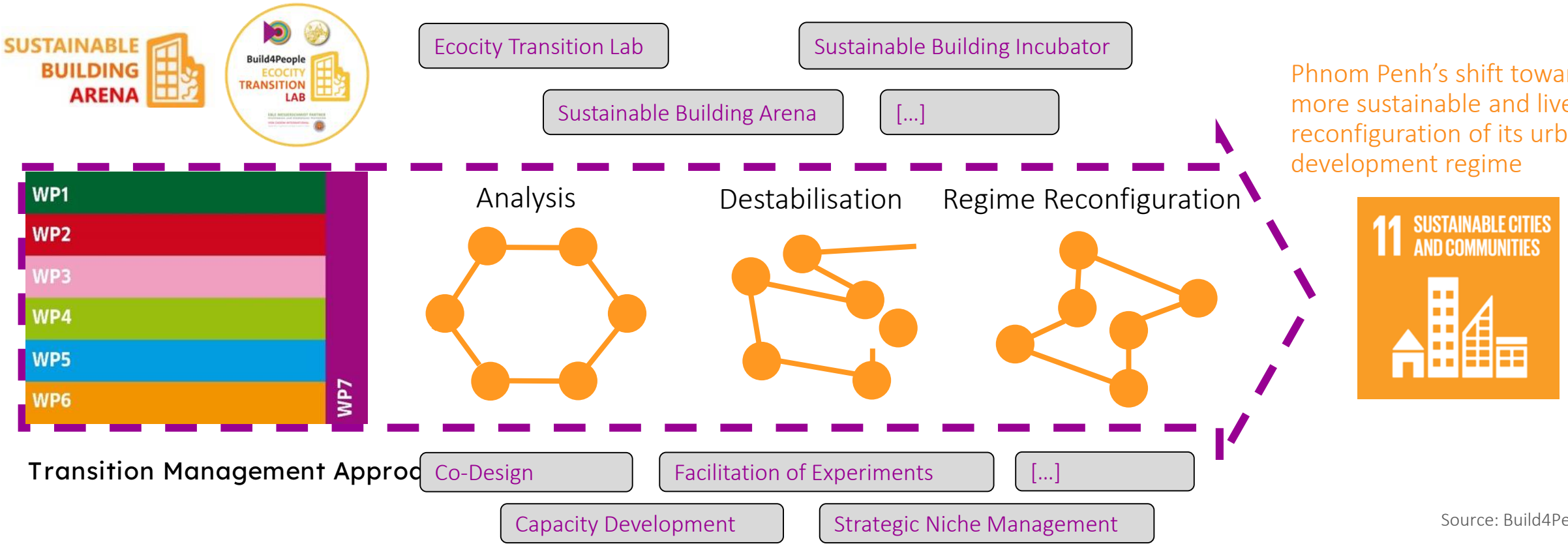


➢ Supporting a more sustainable urban transformation pathway

Source: Build4People

https://build4people.org

Build4People Transition Management Instruments



Phnom Penh's shift towards a more sustainable and liveable reconfiguration of its urban development regime

Source: Build4People

https://build4people.org

Sustainable Development of Urban Regions

Build4People Conclusions

- ✓ Entry points for Build4People are the building and neighbourhood planning sectors.
- ✓ Sustainable urban transformation by means of a process-orientated systemic & cross-cutting approach.
- ✓ To maximize impacts, Build4People's approach is getting actively communicated & disseminated.
- ✓ *Looking for co-funding partners in regard of implementation phase (2025-2027)!*

➢ Successful multi- and transdisciplinary research is a matter of intensive communication and of personal dedication!

https://build4people.org

Sustainable Development of Urban Regions

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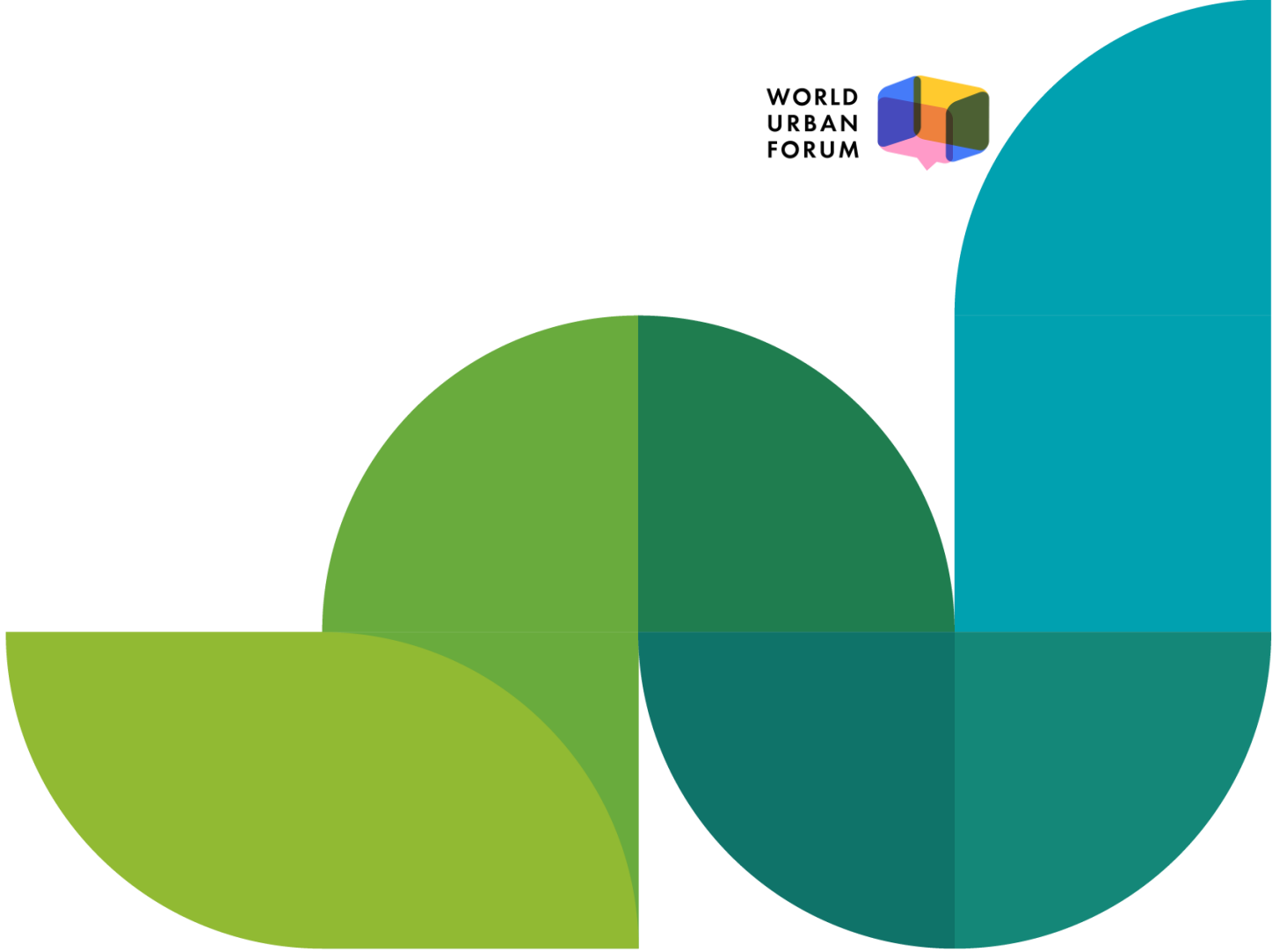
PolyUrbanWaters

Dr Bernd Gutterer
Borda e.V



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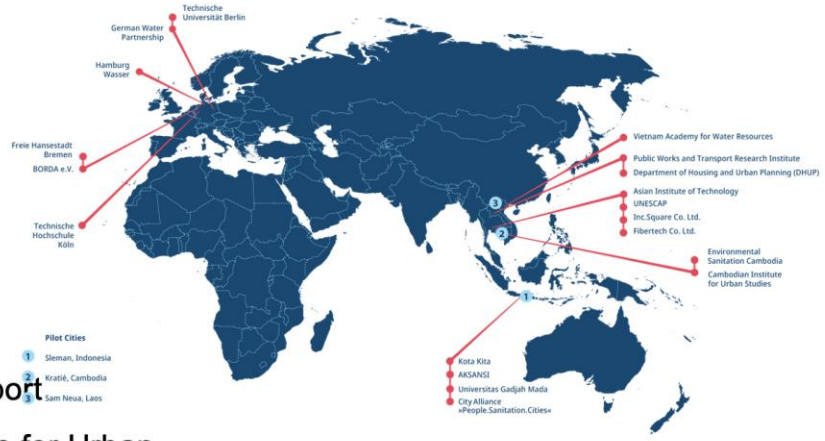
Project Partners



BORDA e.V., TH Köln (ITT), TU Berlin (Habitat Unit),

Asian Institute of Technology, Laos Public Works and Transport Research Institute, AKSANSI Indonesia, Cambodian Institute for Urban Studies, German Water Partnership, Hamburg Wasser, City Alliance People.Sanitation.Cities, Universitas Gadjah Mada, Environmental Sanitation Cambodia,, Kota Kita: A City for All, Freie Hansestadt Bremen, UNESCAP: UN Economic and Social Commission for Asia and the Pacific, Vietnam Academy for Water Resources

Project Goals

Development of flexible **and scalable models** that **address existing and emerging challenges** for the management of urban water resources **in secondary and tertiary** cities in SEA

www.polyurbanwaters.org

Leading research questions = all related to localization of SDGs

- In view of rapid urban growth and limited professional and financial capacities, what options do secondary and tertiary cities have for water-sensitive urban development?
- Which urban planning and water management instruments can effectively and sustainably help these cities with their specific characteristics?
- How can effective cooperation mechanisms for water-sensitive urban development be established between state institutions, investments and communities?

Situation in secondary and tertiary cities in South East Asie

- In the face of rapid urban growth, local goals are challenged to develop robust models, comprehensive capacity and funding to adress water challenges
- Local governments have only (very) limited capacity for urban planning and law enforcement
- Land use changes in urban areas are basically driven by uncontrolled private investments.
- Intersectorial cooperation is informal and barely forseen in budgeting/decision making processes

Expectations from local governments in South – East Asia

- To get practice-orientated, science based understanding of existing and upcoming water challenges within their urban development process for their decision making
- To develop capacities to make use of tools that contribute to water sensitive transformation
- To devlop options for strategic projects that can contribute to watersensitive city development (that can later submitted to national goverment and international community)

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Implementation of the Ecosystem Services concept into the Green Infrastructure Planning for resilient urban development in the Ruhr and in Chinese Megacities (IMECOGIP)

Prof. Dr. Harald Zepp
Ruhr University Bochum

Prof. Dr. DONG Nannan
Tongji University, Shanghai

Prof. Dr. GAN Jing
Tongji University, Shanghai

Green infrastructure is critical infrastructure, as it carries ecosystem services

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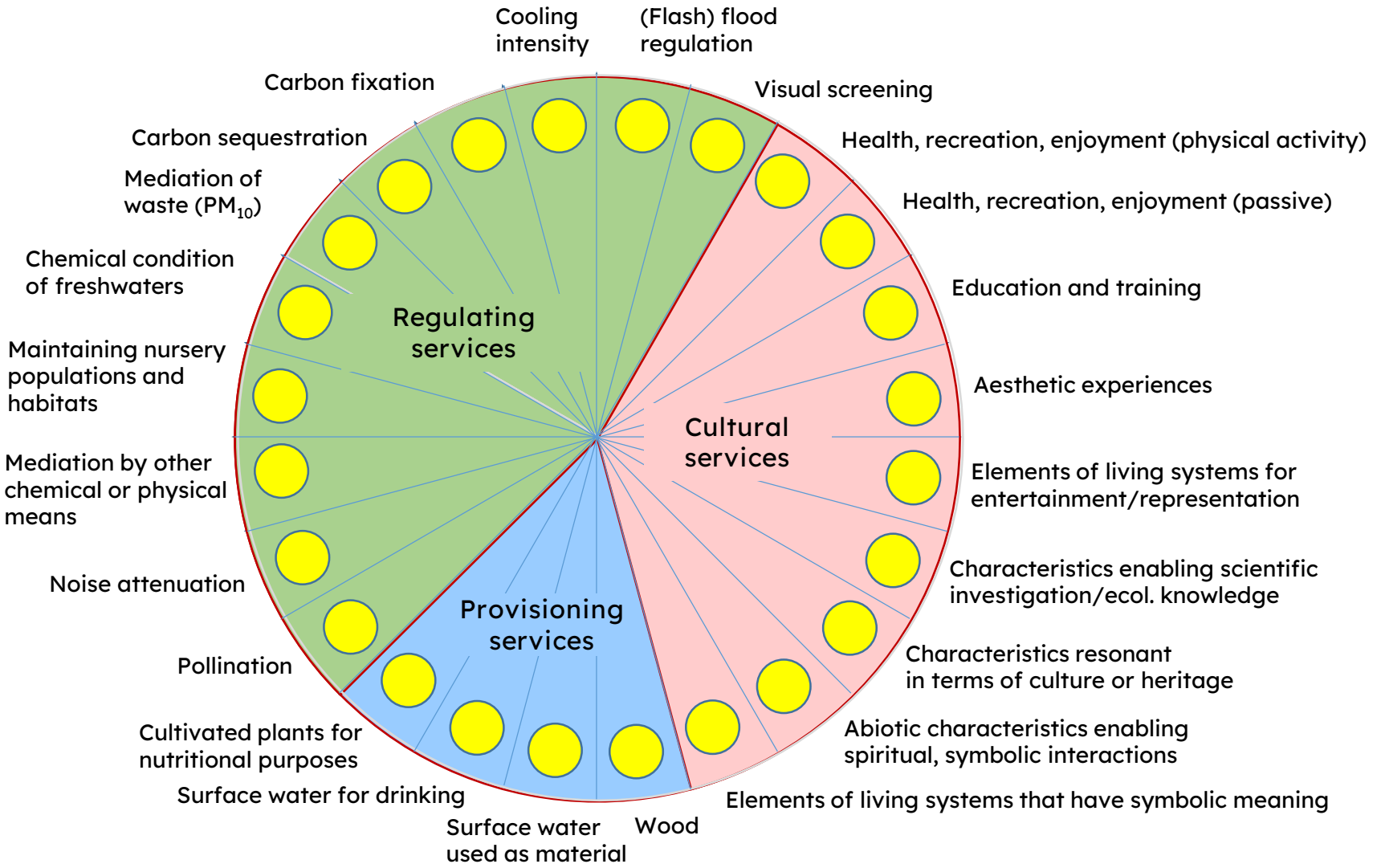
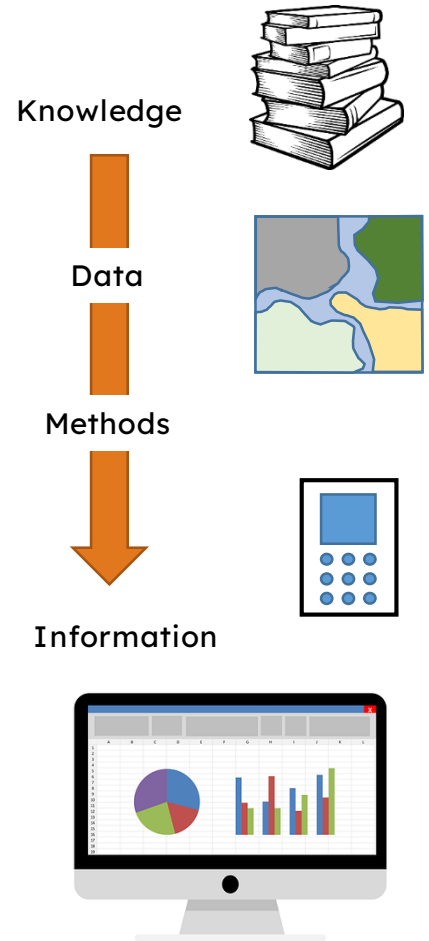
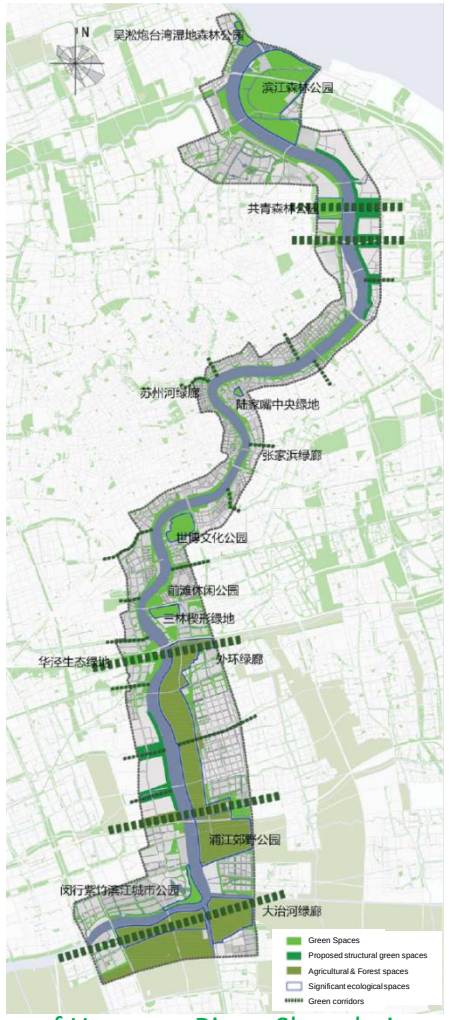


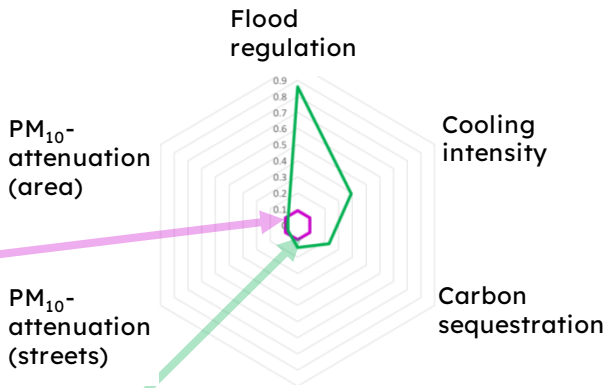
IMECOGIP-Toolbox

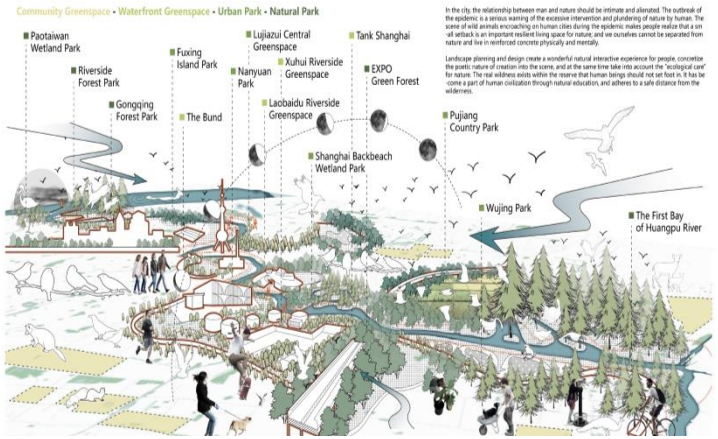


Quantifying Services with the IMCOGIP-Toolbox -Developing Regulating Services in waterfront area



Container terminal/ brownfield





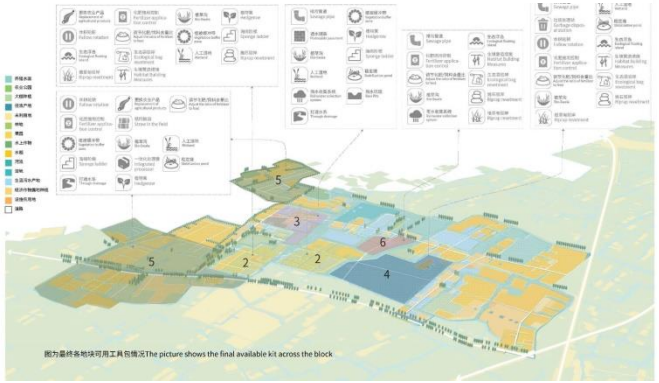
Waterfront revitalization Plan of Huangpu River, Shanghai

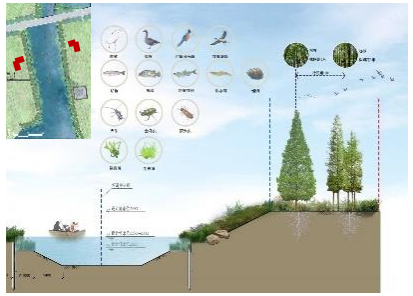
Waterfront revitalization

Waterfront revitalization design

3 Scenarios in Ecological Landscape Planning in Shanghai

Country Park

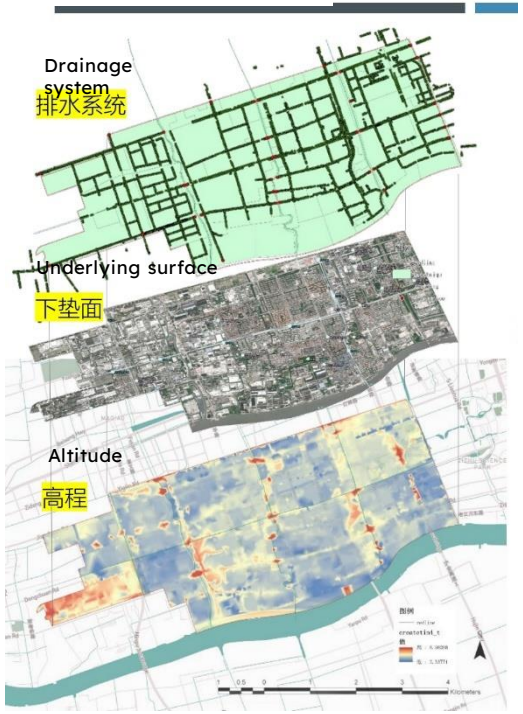




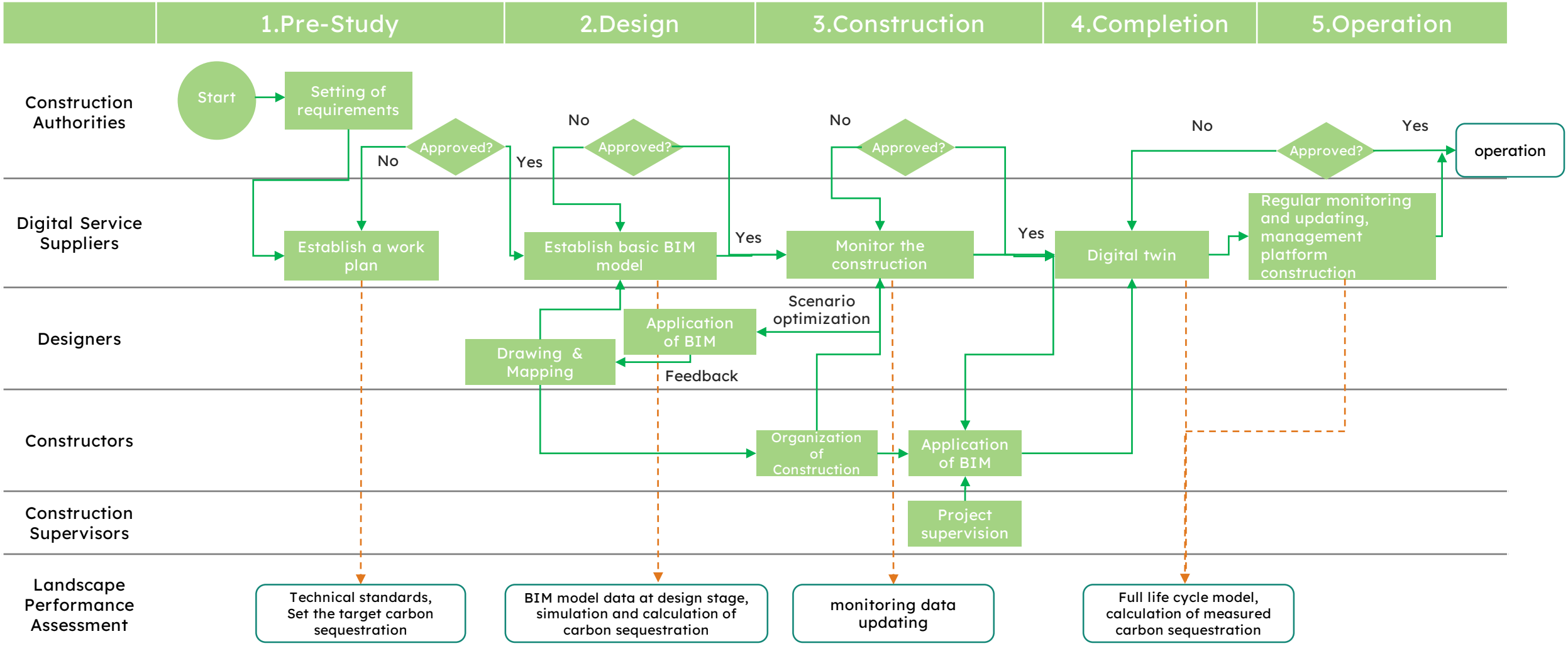
NDVI

Rural Planning

Urban Renewal



Renewed Workflow of Rural Ecological Restoration Design in Shanghai (Trial)



Sustainable Development of Urban Regions

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TOSCA

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Ministry of Local Government of Palestine

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Sustainable Development of Urban Regions

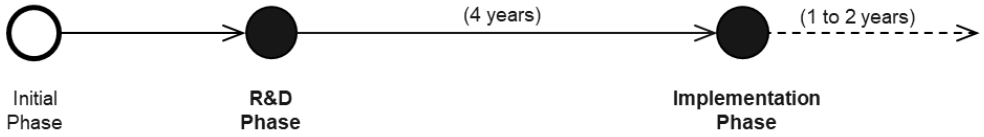
Funding + Project Phase

BMBF
Federal Ministry of Education and Research

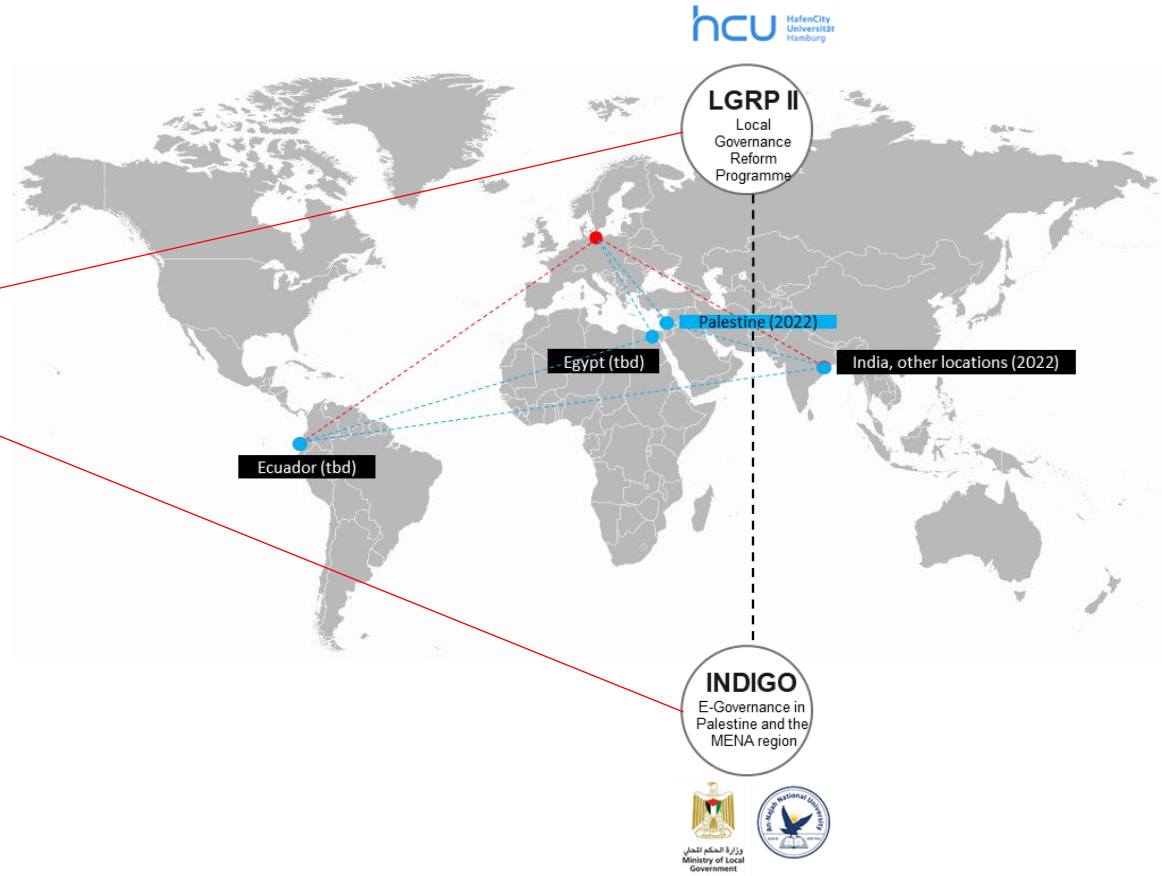
BMZ
Federal Ministry for Economic Cooperation and Development

giz Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH

TOSCA
Toolkit for Open and Sustainable City Planning and Analysis



Locations



Sustainable Development of Urban Regions

What is TOSCA ?

(Toolkit for Open and Sustainable City Planning and Analysis)

TOSCA is a web-based, open-source, geographic information system (GIS) toolkit for touchable and browser technology, optimized to be taken up by non-tech-users, enhancing decision-making processes in the context of planning for urban development. It is a digital solution for interactive participation of the public and institutional stakeholders in environments of development cooperation.

Tangible Hardware Interfaces

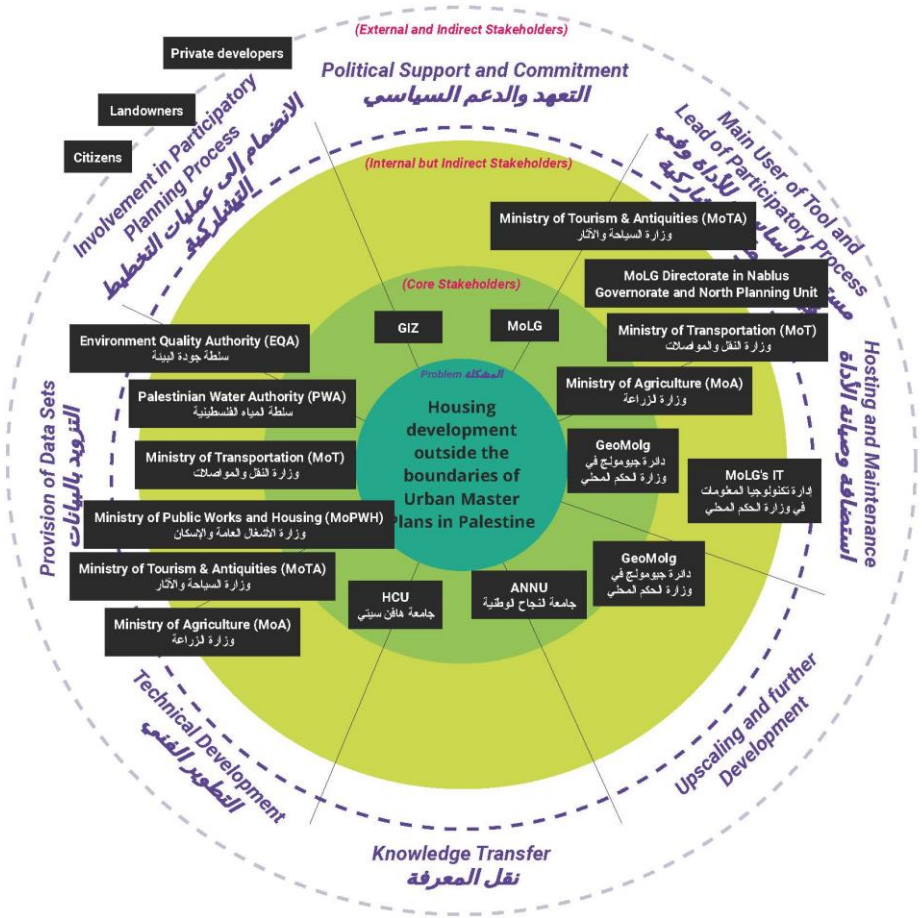
+

OS Geoinformation Software (GIS)

+

Tutorials and Guidelines

Actors



Steps

1. City and Use Case definition >>
2. Local Partners definition >>
3. Mobilization of local Stakeholders >>
4. Use Case specification and data preparation >>
5. Hardware acquisition >>
6. Tool adaptation >>
7. Testing + Revision >>
8. Training + knowledge transfer >>
9. Take-up of the Toolkit >>

Challenges

LOCATION: A city with strong political will, citizen engagement and openness of data usage.

LOCAL TECH TEAM: A definition of the appropriate team from the beginning is crucial for the successful deployment of the toolkit on each location.

ENGAGEMENT: Ensure the active participation of all relevant actors from the beginning of the project. Facilitate sufficient period for the collection of input.

DATA QUALITY: The availability and quality of local data sets relevant to the use case are essential before taking up any project location.

LOCAL ACQUISITION: Flexibilization in the hardware requirements for the optimal local adaptation to any location.

TECH DEVELOPMENT: Constant iterative S.A. development seeking its adaptability to multiple users and cases.

CAPACITY BUILDING: Should be designed in a systematized manner, while also adaptable to different contexts and to technical and non-technical users.

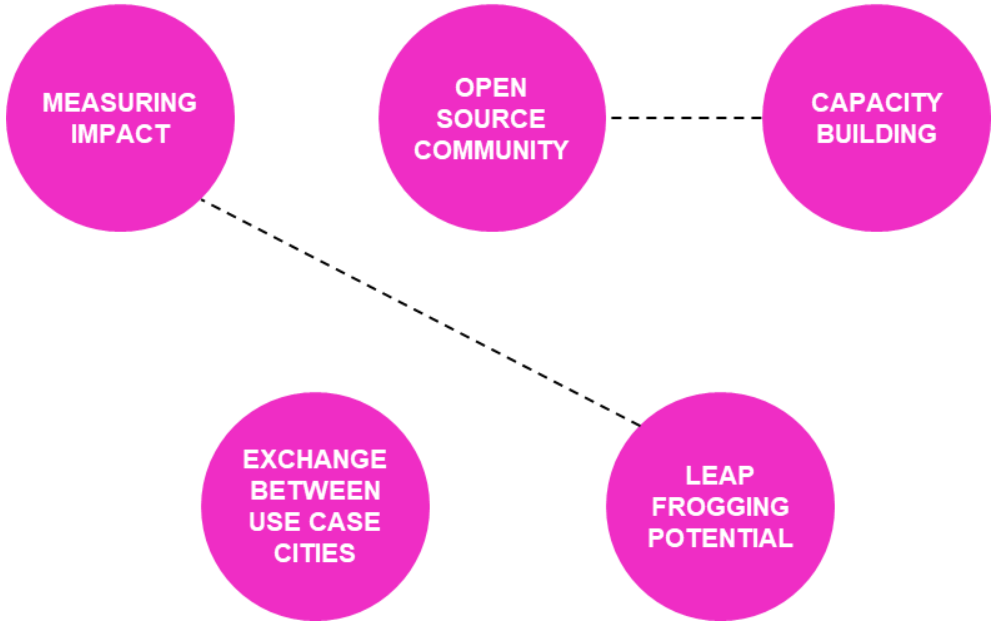
MONITORING: How to measure in a quantitative manner the impact of the tool in the longer term.

Advantages

(in the context of governance)

- The Toolkit can advocate for **open data Governance and Transparency.**
- It has demonstrated through its implementation the gains from **using data in a shared manner** and its contribution to decision-making processes amongst **different planning levels**.
- Through collaborative participation when involving citizens, Tosca can enhance a higher level of **political literacy in the general population**.
- Tosca can further enable the **incorporation of digitalization** across multiple sectors of local governance.

Next Steps



Discussion


SCIENCE MEETS POLICY
New approaches for multisectoral collaborations to build urban-rural resilience for sustainable futures
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- What can we do to close the implementation gap in sustainable urban development approaches?

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