

Understanding Innovative Initiatives for Governing Food, Water and Energy Nexus in Cities - IFWEN

Jose A. Puppim de Oliveira

Líder do Consórcio, IFWEN - "Understanding Innovative Initiatives for Governing Food, Water and Energy Nexus in Cities" (a JPI Urban Europe and Belmont Forum Project)

&

Professor Titular

Fundação Getulio Vargas (FGV)

jose.puppim@fgv.br



Supported by:



THE SUSTAINABLE URBANISATION GLOBAL INITIATIVE (SUGI) FOOD-WATER-ENERGY NEXUS



IFWEN - Understanding Innovative Initiatives for Governing Food, Water and Energy Nexus in Cities



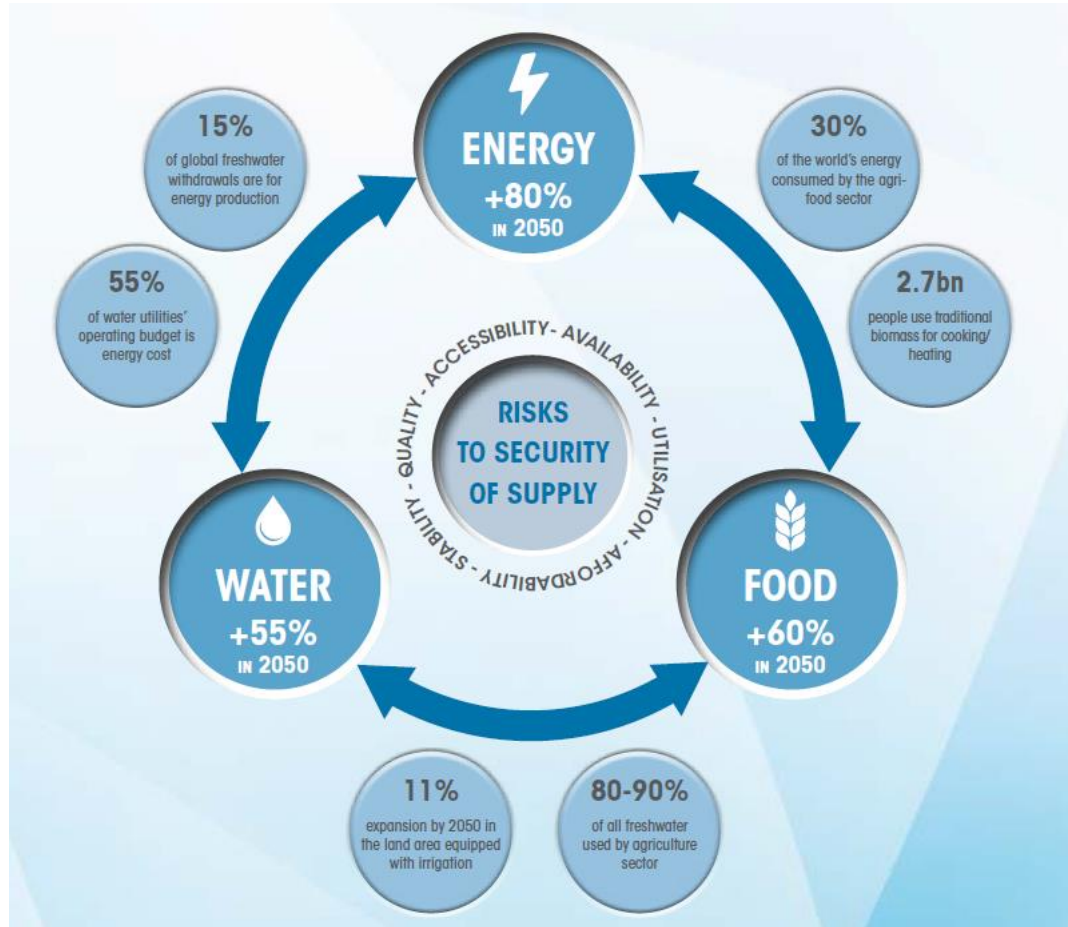
Project Partners

- 1) FGV/EAESP – Fundação Getulio Vargas (FGV), São Paulo, Brazil. portal.fgv.br/en
- 2) Yale University - Urbanization and Global Change Lab, New Haven (CT), USA
www.yale.edu and <http://urban.yale.edu>
- 3) The Nature of Cities – TNOC, New York (NY), USA www.thenatureofcities.com
- 4) The Stockholm Resilience Center, Stockholm, Sweden www.stockholmresilience.org
- 5) Ming-Chuan University (MCU), Department of Urban Planning and Disaster Management (UPDM), Taipei, Taiwan (China) <http://web.updm.mcu.edu.tw/en>
- 6) ICLEI – Local Governments for Sustainability –World Secretariat (ICLEI-W), Bonn, Germany www.iclei.org
- 7) The Africa Secretariat of ICLEI - Local Governments for Sustainability (ICLEI-A), Cape Town, South Africa www.africa.iclei.org

Funded by: FAPESP, NSF, FOMAS, BMBF, MOST, START



The Urban Sustainability Problem



Source: IRENA (2015).

Green and Blue Infrastructure Proposition

“An interconnected network of a wide range of landscape elements that **support** native species, **maintain** natural ecological processes, **sustain** air and water resources, and **contribute** to the health and quality of life for communities and people.”

Types of GBI

UF: Urban forest;

GS: Green space;

ST: street trees;

UA: Urban agriculture;

GR: Green roofs;

UW: Urban wetlands.

McMahon, E. T., & Benedict, M. A. (2000). Green infrastructure. *Planning Commissioners Journal*, 37(4), 4-7.

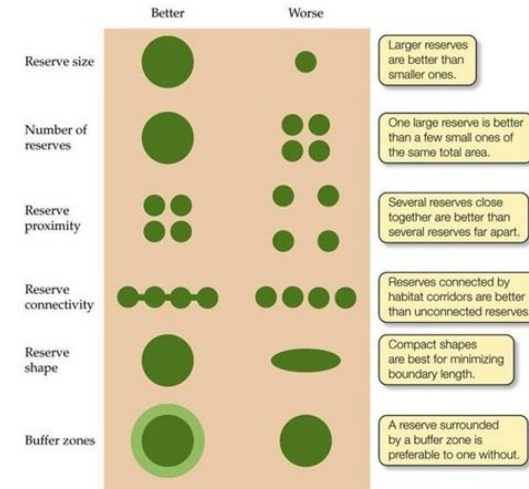
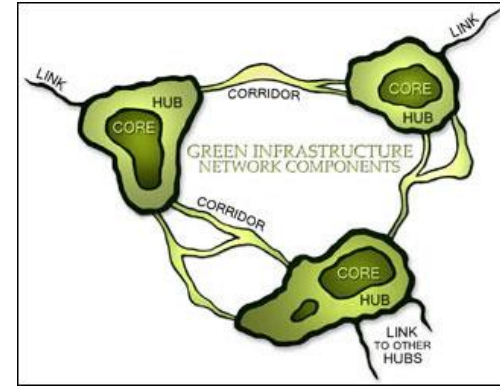


Figure 23.17

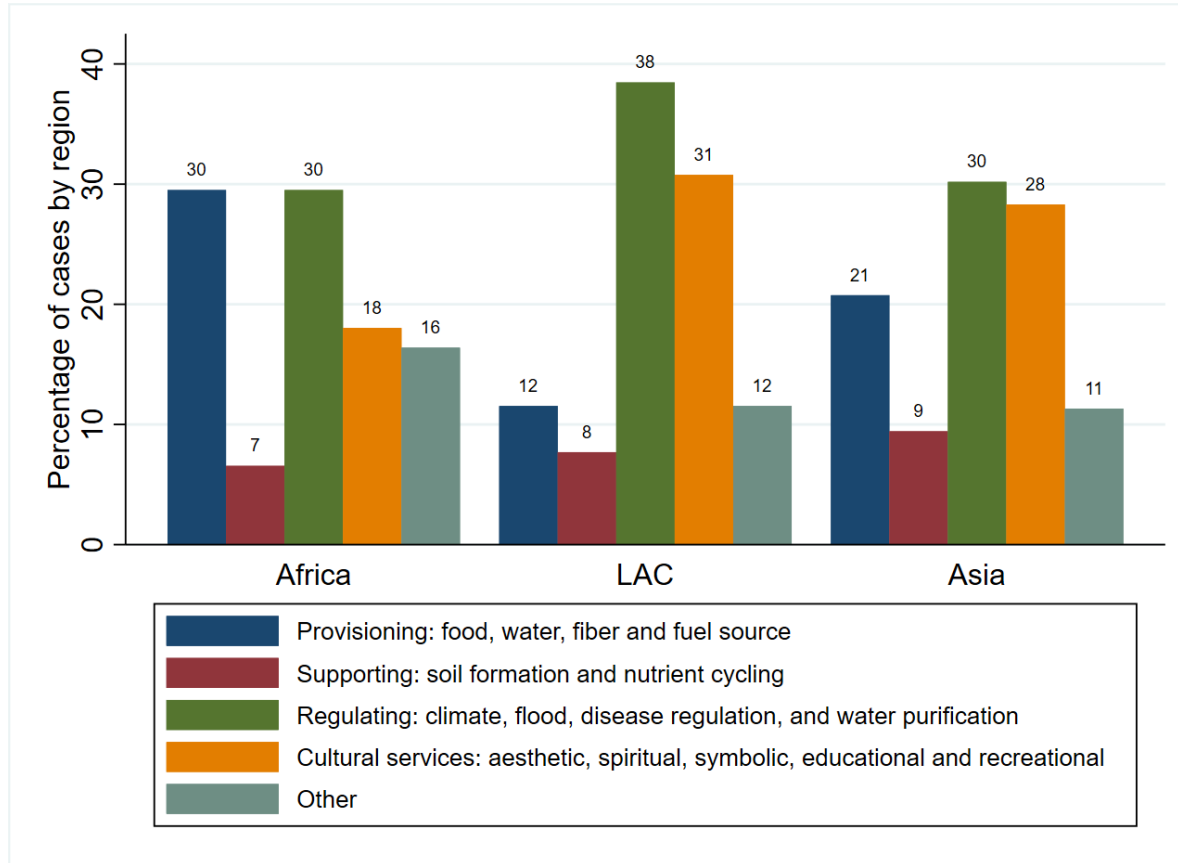
General Objectives

- (1) understanding innovative governance mechanisms to manage the water-food-energy nexus (innovation for FWEN, or IFWEN) focusing on Green and Blue Infrastructure (GBI) in cities through analytical case studies and empirical research;
- (2) creating a framework to explain how cities develop institutions and gain the capabilities to innovate in FWEN based on GBI;
- (3) developing and disseminating guidelines and tools for supporting cities to use the nexus approach.

Mapping Existing Innovations: Survey (ICLEI Database)

- Map the innovations in GBI in ICLEI members
- Type of innovation
- Why they were created (motivation)
- Impacts
- Understand the institutional arrangements
- 82 cities

Regions have different focuses



Sao Jose dos Campos, Brazil

533,000 inhabitants



Nagpur, India

2,405,665 inhabitants



Gangtok, India

100,286 inhabitants



Kunming, China

3,895,000 inhabitants



Florianopolis, Brazil

477,798



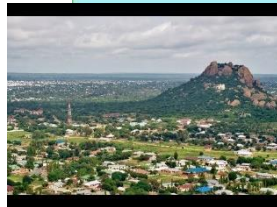
Taipei

2,646,000 inhabitants



Dodoma, Tanzania

2,084,000 inhabitants



Lilongwe Malawi

989,318 inhabitants



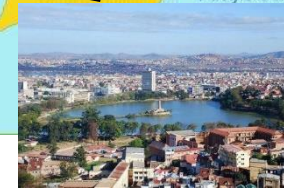
Johannesburg, South Africa

957,441 inhabitants



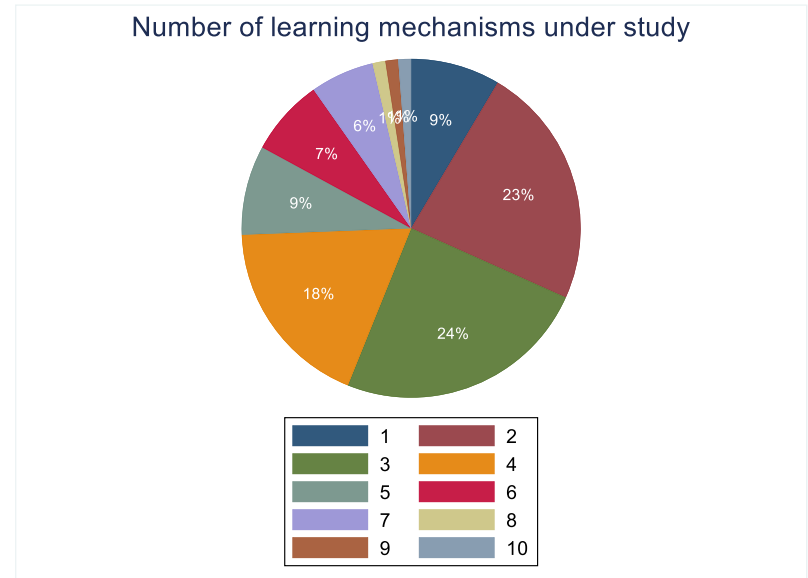
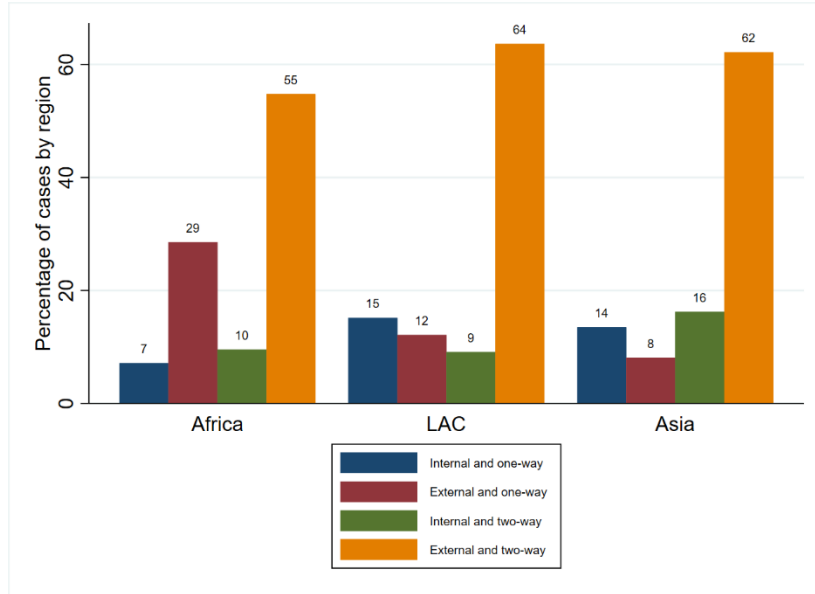
Antananarivo, Madagascar

1,613,375 inhabitants

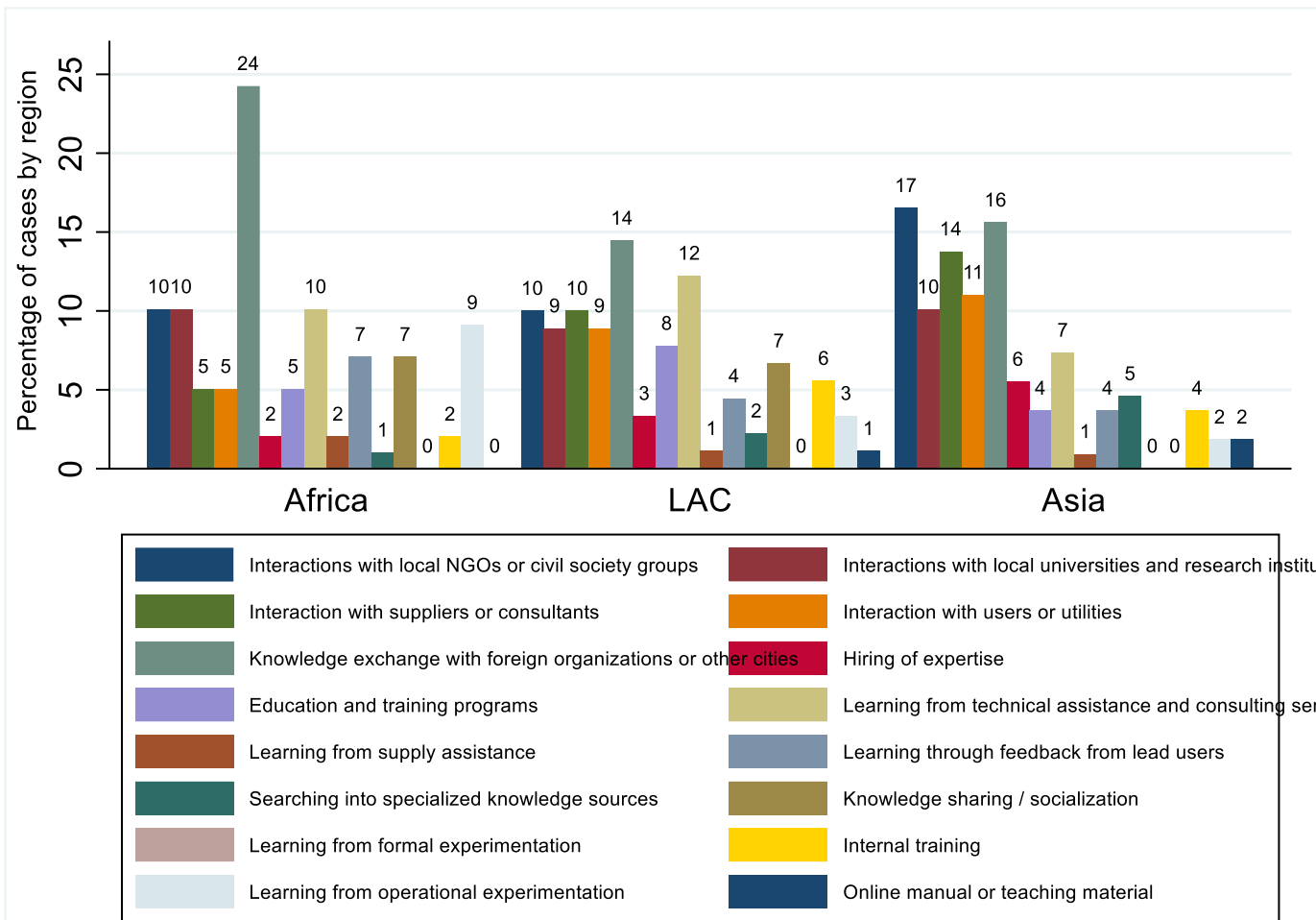


How cities innovate and learn

External and two-way knowledge flow is the most common practice with at least three learning mechanisms.



High dependency from external sources for policy learning.



GOFWEN Project: Pegasus Call (Take it Further Grants)

- **Early-stage Grants Advancing Sustainability Science (PEGASuS)**
- **2 projects (IFWEN and GLOCCUL)**
- **6 cities**
- **Make the cities interact and learn from each other**

Sao Jose dos Campos, Brazil
533,000 inhabitants



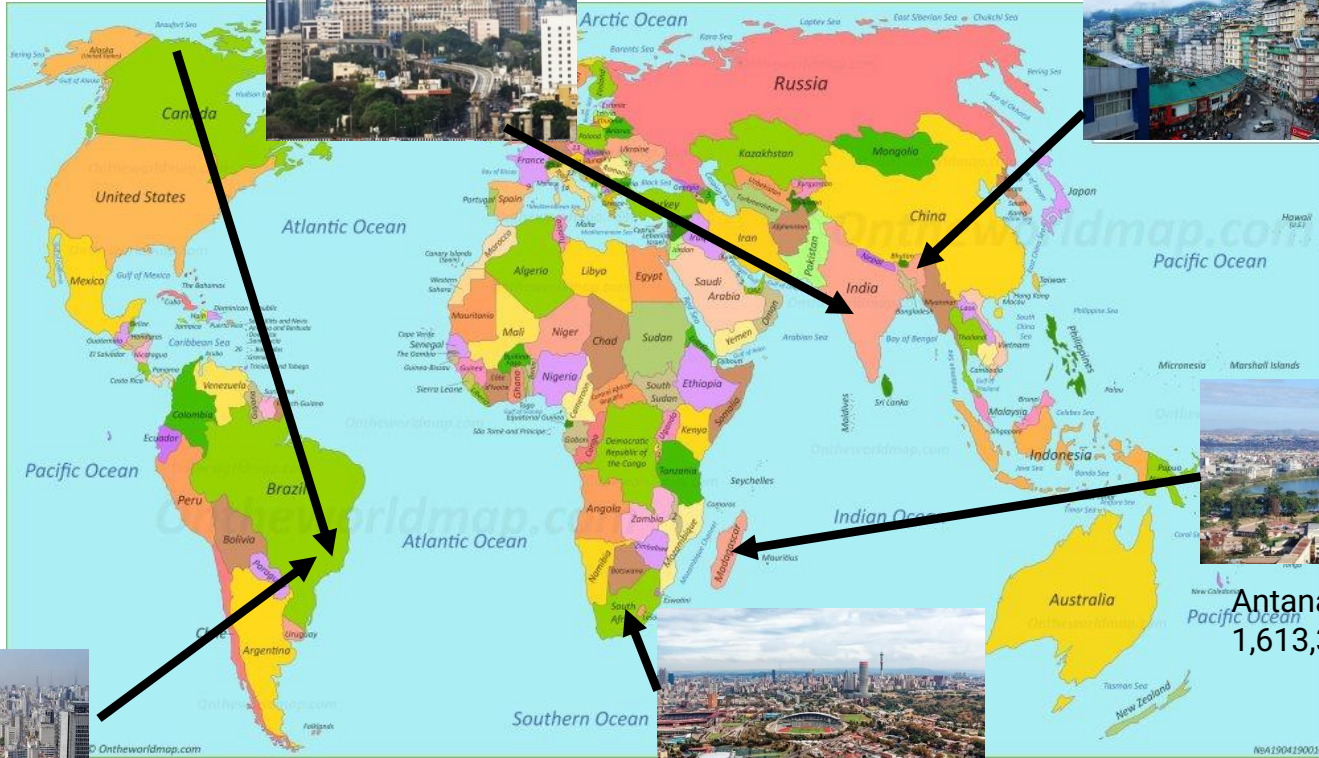
Nagpur, India
2,405,665 inhabitants



Gangtok, India
100,286 inhabitants



São Paulo
12.18 million inhabitants



Johannesburg, South Africa
957,441 inhabitants



Antananarivo, Madagascar
1,613,375 inhabitants



GOFWEN

- 6 city officials
- Provide cities with background and guidelines (step-by-step guide to design GBI for impacting IFWEN)
- Develop a platform to assess learning among the officials

Activities

Proposed Activity	Date
Project Start Date	November 2020
PHASE 1: RESEARCH CO-CREATION AND SYNTHESIS	January 2021
PHASE 2: DESIGN AND DEVELOPMENT OF CITY DIALOGUES AND PUBLIC ONLINE ATLAS	February - September 2021
PHASE 4: EVALUATION AND REPORTING	October 2021
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Evaluation and Reporting	November 2021

Obrigado!

jose.puppim@fgv.br



IFWEN