



Decision making process in greening cities: The case of Spain. Opportunities and errors

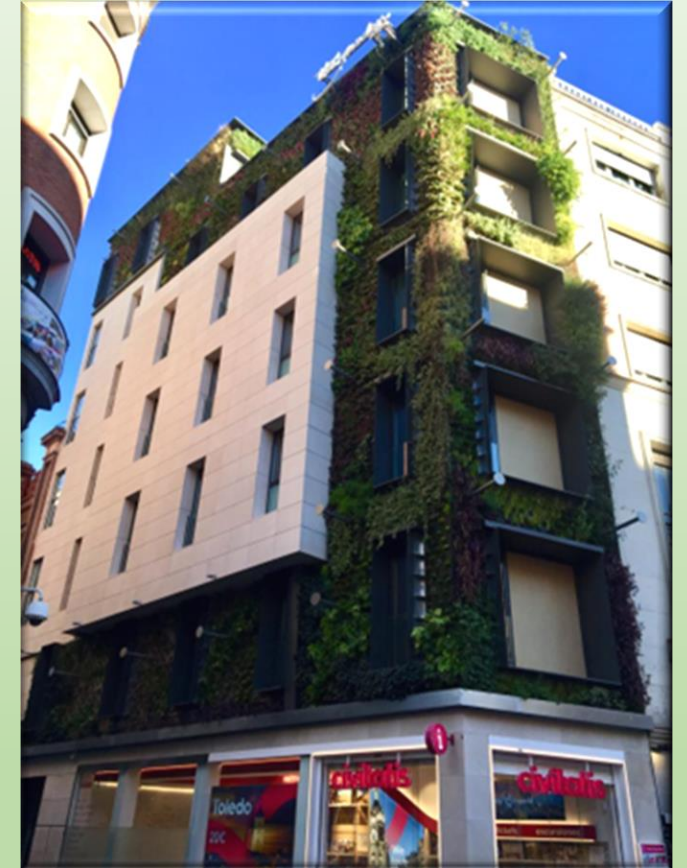
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1. Introduction (1)

- Greening cities is a value-added process with complex management
- The challenge is to get an efficient coordination between stakeholders involved
- Multidimensional roles and goals need multifunction activities



1. Introduction (2)

➤ Goals

- Ornamental, landscape
- Decontamination
- Healthy environment
- Recreation
- Biodiversity
- Socioeconomic welfare

➤ Resources available

- Location, space
- Financial
- Human
- Culture and tradition



1. Introduction (3)

- Technology
 - Agricultural practices
 - Gardening tradition
 - Building construction
 - Energy saving, isolation
 - Selection of plant varieties



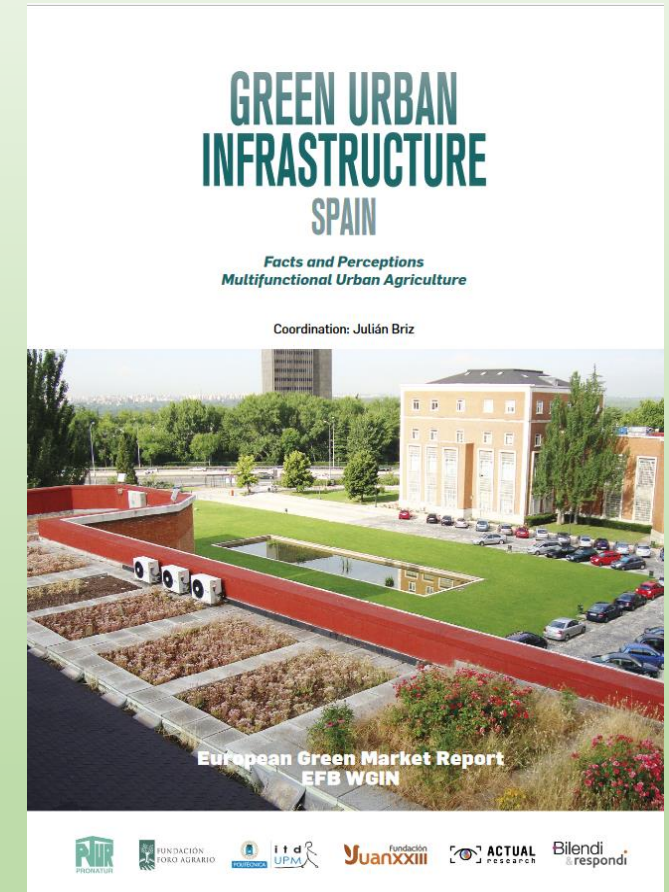
1. Introduction (4)

- Actors involved
 - Administration: national, regional, local
 - Enterprises
 - Academic and research institutions
 - Nationhood organizations
 - NGO
- Challenge to organize, manage and coordinate



2. Decision making process (1)

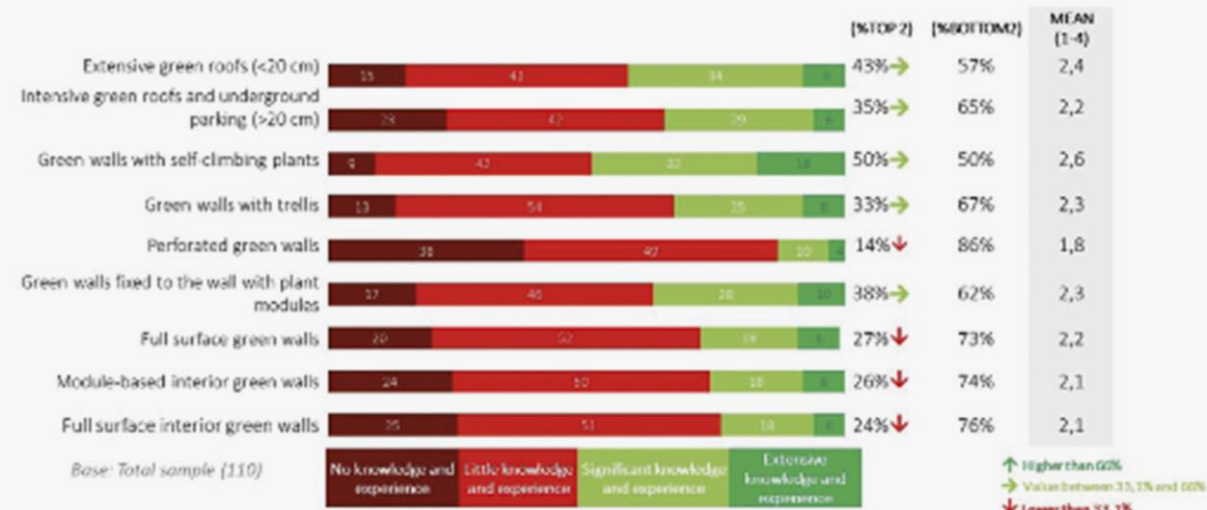
- Key strategic area
- Difficult to analyze
- Political and socioeconomic impact
- Need to understand urban actor's opinion
- Incentive study and research on decision making
- Recent study on fact and perceptions



2. Decision making process (2)

LEVEL OF KNOWLEDGE AND EXPERIENCE OF GREEN INFRASTRUCTURE SOLUTIONS

The greening of walls with climbing plants is what green infrastructure experts have the greatest knowledge of and experience in. However, there was a notable lack of knowledge on perforated green walls

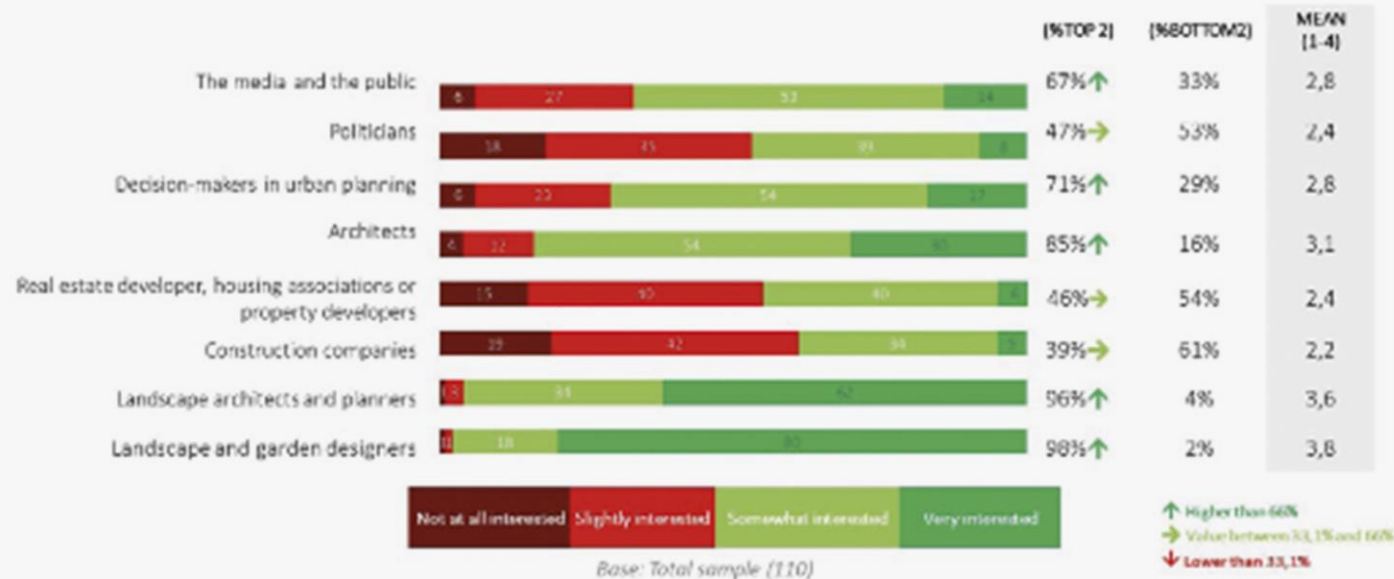


Q. 5.2. Evaluate your level of knowledge of and experience with the following green infrastructure solutions. Extensive knowledge and experience, significant knowledge and experience, little knowledge and experience or no knowledge and experience.

2. Decision making process (3)

DEGREE OF INTEREST IN GREEN INFRASTRUCTURE

Landscape and garden designers, together with landscape architects and designers, are the groups that are perceived as the most interested in green infrastructure. However, it is the construction companies and real estate developers who are perceived as the least interested.



Q. 6.1 To what extent do you consider the following groups interested in green infrastructure? Very interested, somewhat interested, slightly interested or not at all interested

3. The case of Spain (1)

- Historical evolution
 - Traditional period
 - Food and ornamental goals
 - Private initiative
 - Strong tradition at regional level
 - *Rurban* migration movements
 - Demographic concentration
 - Climate change
 - Contamination
 - Academic and research initiatives



3. The case of Spain (2)

- Mature period 21st century
 - Public and private joint projects
 - Social pressure for greening concern
 - Nature base Solutions
 - International relations: WGIN, EFB



4. Evolution and trends

➤ Urban greening as a dynamic approach

In 2013, the European Commission adopted strategies to promote the implementation and support of green infrastructure, taking into account:

- Physical components
- Projects
- Methodologies and techniques



5. Case Study: Green Urban Infrastructure in Madrid (1)

- Madrid is a city with green areas, great artistic value heritage
- Recent dynamics decades

In 2017 :

- Plan A for Air Quality
- Climate Change
- Madrid+Natural
- Green Infrastructure and Biodiversity Plan

In 2018

- *Madrid Recupera Plan*: the project "Madrid Rio."



5. Case Study: Green Urban Infrastructure in Madrid (2)

- The EU initiative in 2020, through the EIT Climate KIC Infrastructure and Biodiversity Plan with 180 specific actions,
- Madrid 360 Metropolitan Forest as a 600-ha green belt
- In 2021, climate neutrality in 2030



5. Case Study: Green Urban Infrastructure in Madrid (3)

- "Madrid Nuevo Norte":
 - Investment of 25 billion euro
 - More than four-hundred thousand sqm of green
 - 75 km green ring
 - 100.000 new trees



5. Case Study: Green Urban Infrastructure in Madrid (4)

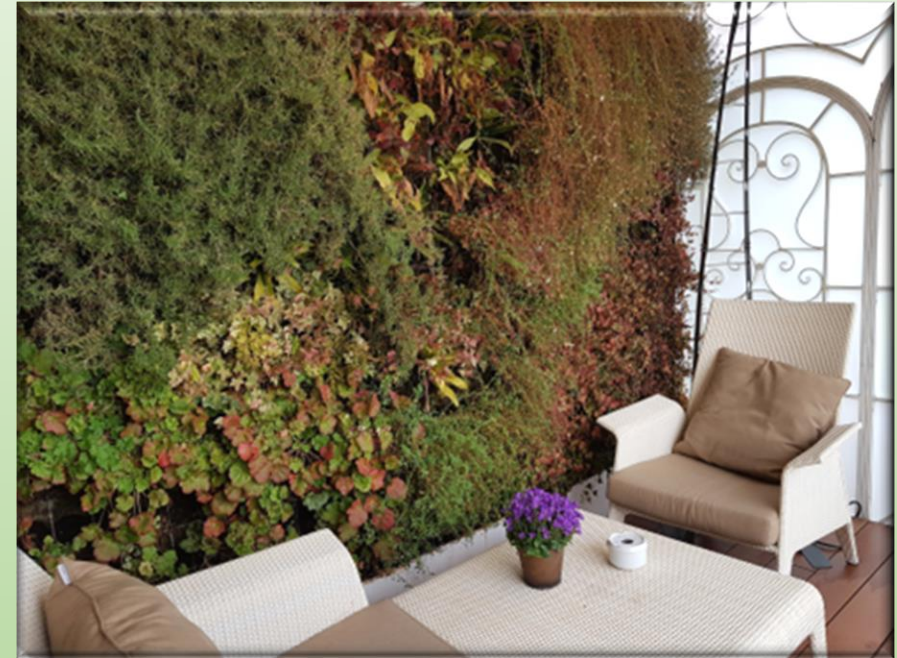
The COVID-19 pandemic has shown us natural environment:

- A model of home-office housing
- Socio-political loyalty
- Training and providing information to citizens
- Priority to raise awareness to achieve a sustainable future.



6. Opportunities and errors

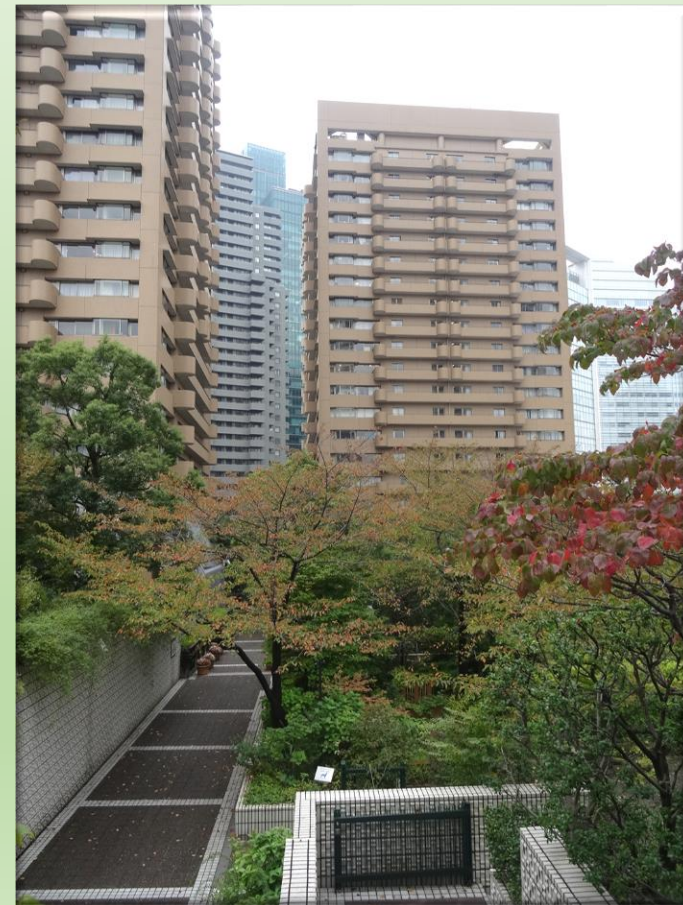
- Further studies and lessons learned
- Errors in the green urban chain
 - Basic links that are altered by external factors.
 - Supplier link (producer)
 - Industrial link
 - User-consumer link
 - External factors
 - Government:
 - Professional associations
 - NGOs, civil society
- For efficient decisions making, transparency and less bureaucracy are highly recommended



7. Challenges in Spanish urban greening development (1)

Ethics

- Human
 - Technicians
 - Entrepreneurs
 - Officials
 - Politicians
 - NGO
- For nature
 - Mother nature
 - Natural resources conservation



7. Challenges in Spanish urban greening development (2)

Innovation

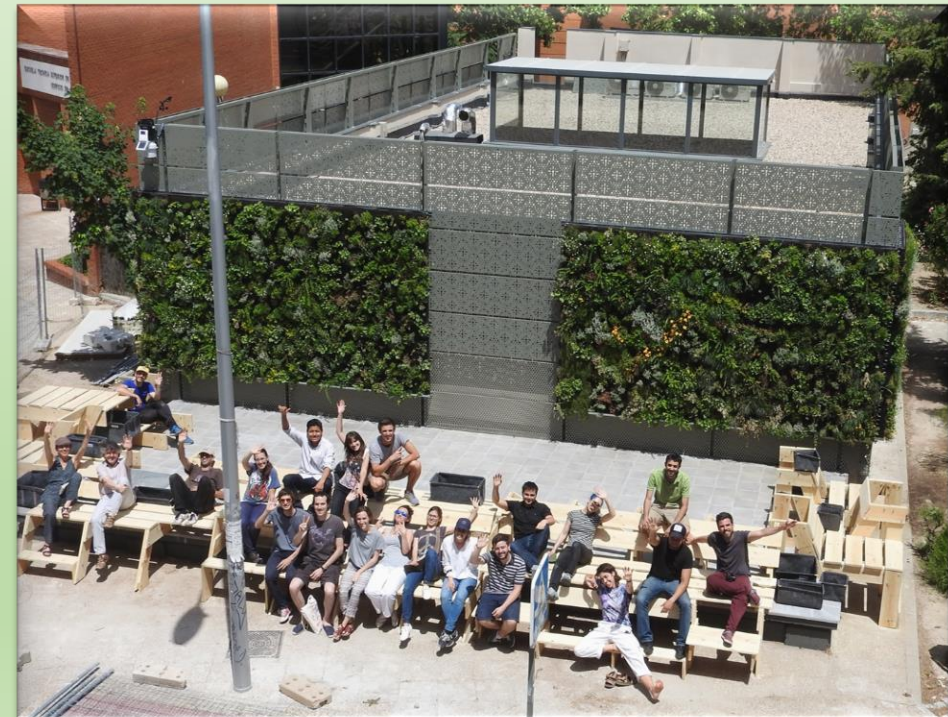
- Artificial intelligence
- Technical
- Management
- Genetic engineering
- Strengthen international cooperation



7. Challenges in Spanish urban greening development (3)

Training/information

- Teaching
- Research
- Transparency
- Fake news identification
- Education and environmental improvement



Thank you!

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