

Corso di Dottorato di Ricerca in Scienze della Vita e dell'Ambiente

Ciclo XL

Resilient cities to face climate crisis: bridging the gap between local policies, practices and capacities

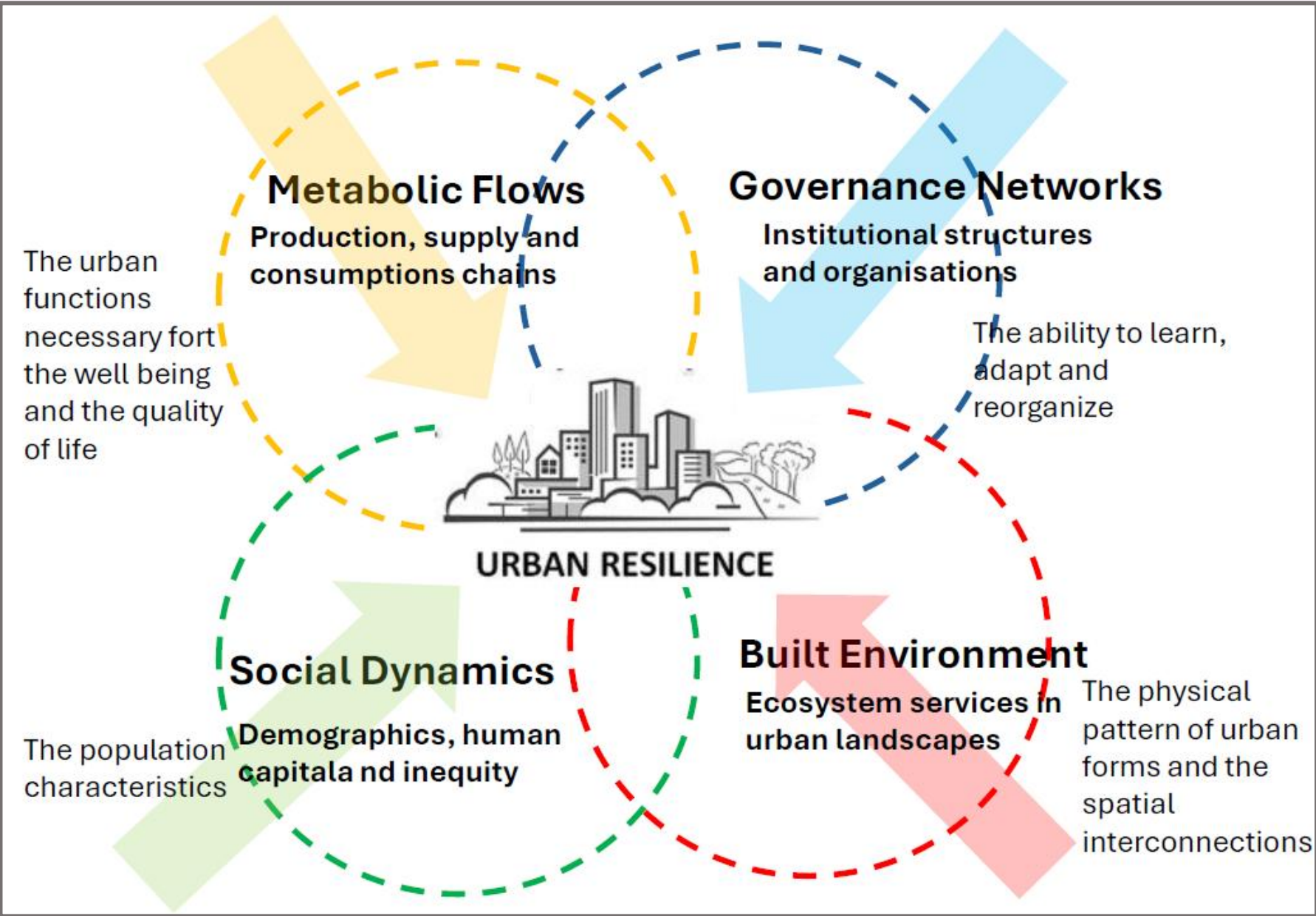


Giulia Sestilli
DiSVA, Laboratorio Riduzione Rischio Disastri
Tutor: Prof. Fausto Marincioni



INTRODUCTION

We live in an era marked by a profound environmental crisis, whose implications unfold through a complex web of hazards, vulnerabilities, and risks. In this context, Municipalities are called to implement concrete urban management actions capable of reducing specific vulnerabilities, related to both physical and social dynamics, thus enhancing resilience (Chu et al.,2017; Spano et al.,2021). For local governments, implementing such actions still represents an innovative and complex process that must be pursued while ensuring service continuity and attentiveness to the needs of the population. Therefore, it is necessary to renew current planning approaches and tools, including new actors in urban management, to enhance Municipal adaptation to environmental stresses.



Themes/Domains to prioritize and focus research on urban resilience Source: Resilience Alliance (2007). Drawing by Sarah Strugale. Source: Schiappacasse P.,2018

RATIONALE

Cities are laboratories, where innovative processes of co-design and shared management of urban spaces and heritage are increasingly receiving regulatory support, political recognition, and visibility in the field of urban resilience. Nevertheless, the operational dimensions that enable such practices (e.g., organizational structures, skills, professional capacities) and their actual impact on resilience at the local scale remain largely unexplored.

MAIN HYPOTHESIS

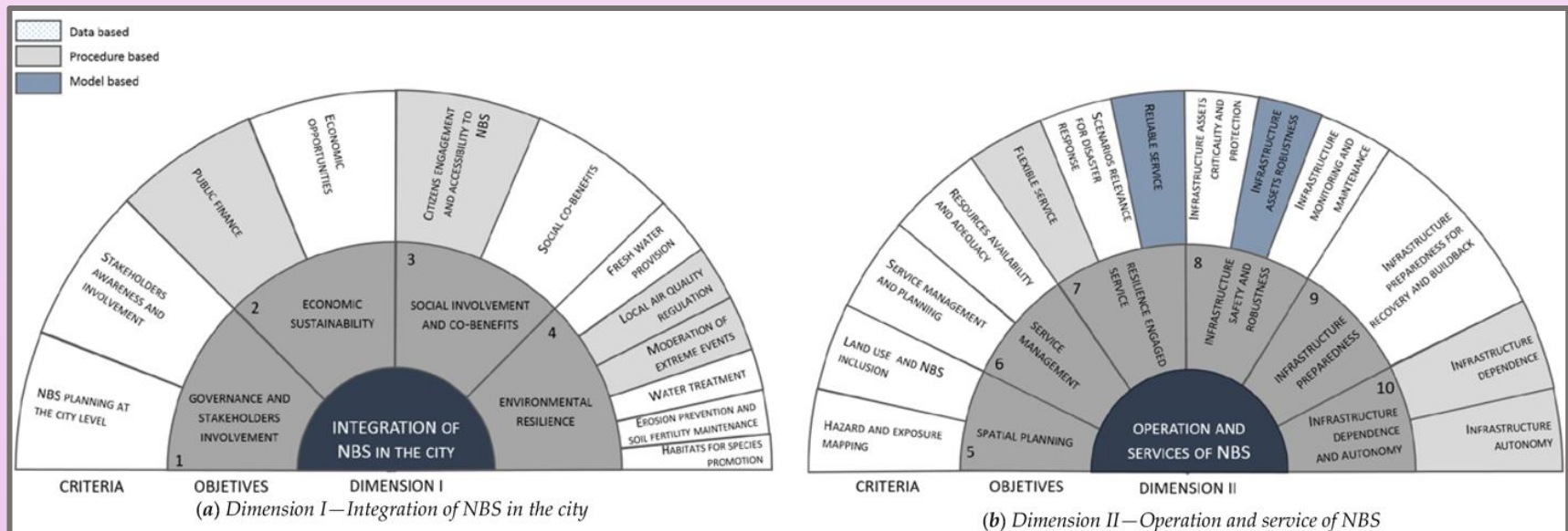
Municipalities that adopt broader forms of stakeholder-participation in the **planning and management of urban spaces** are more effective in enhancing **resilience to climate change**.

SUB- HYPOTHESIS

1. **Effective regulatory framework** for public participation encourages the city governments to pursue structured stakeholder engagement.
2. **Partnerships between Municipalities and civil society** to care and transform urban spaces help strengthening community resilience.
3. **Participatory processes** for the management of urban spaces facilitate the convergence of private resources possibly complementing the public ones.

METHODOLOGY

Four main steps will be carried out for this study: (i) Literature review on public administration and resilience (*ongoing*); (ii) Analysis of stakeholder participation in urban resilience (*ongoing*); (iii) Development of a research plan to define system boundaries and select case studies; (*ongoing*) (iv) Design of an indicator-based analytical framework to assess selected processes; (v) Develop a tool for public officials to implement spatial and social interventions that improve the climate resilience of the most vulnerable communities.



Resilience assessment framework (RAF) objectives and criteria for (a) first and (b) second dimension, specifying the source of information required for metrics determination, by criterion. Source: Beiceiro et al, 2020

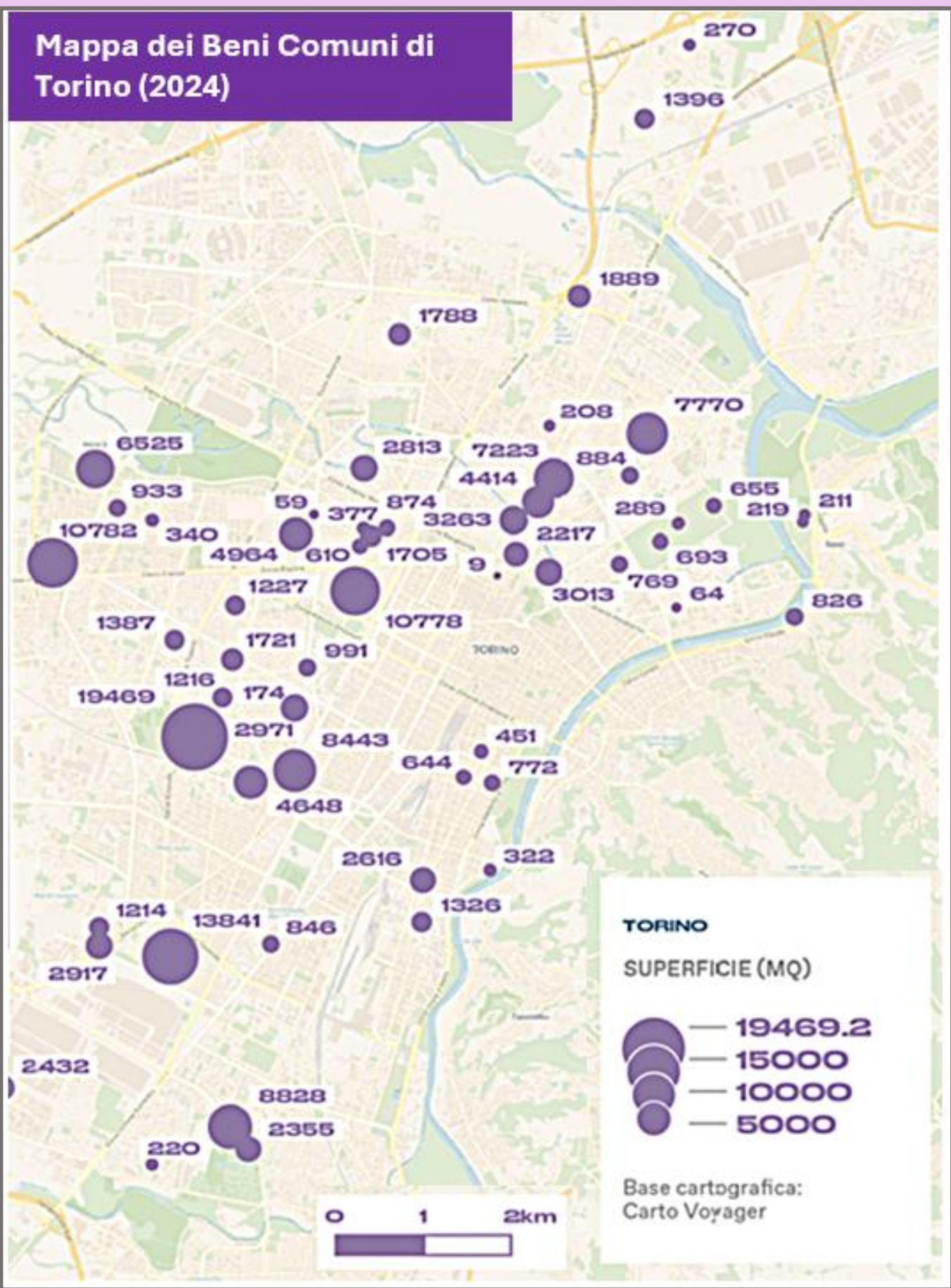
PRELIMINARY RESULTS

The literature review caried out so far enabled me to:

A) Identify the criteria for selecting case studies	B) Identify an initial set of administrative tools that can enhance local stakeholder’s resilience processes
Criteria for selecting tools to enhance city’s resilience <ul style="list-style-type: none">widespread in many citiesmunicipal rules and regulationsincrease stakeholder’s participationplace-basedeffective in producing changes in the short termapplicable beyond climate change issuesenhancing city's redundancyexploiting proximity	Initial set of administrative tools <ul style="list-style-type: none"><i>Strumenti di programmazione territoriale negoziata</i> (e.g., River and Urban Reforestation ContractsCo-planning (e.g., General urban plans, civil protection plans, etc.)<i>Modello dell’ Amministrazione Condivisa</i> (e.g., Patti di collaborazione per la gestione dei Beni Comuni)

NEXT STEPS

Identifying sector-experts who can help in selecting case studies, organize field surveys to collect resources and gray literature, plan and arrange interviews and questionnaires with decision and policy makers , as well as stakeholders and residents at large.



Reworking of the Commons Map of Turin Source: LABSUS, 2024

REFERENCE: Chu Eric, Anguelovski Isabelle, Roberts Debra , Climate adaptation as strategic urbanism: assessing opportunities and uncertainties for equity and inclusive development in cities, 2017, Cities, Volume 60, Pages 378-387, ISSN 0264-2751
Spano D., Mereu V., Bacciu V., Barbato G., Casartelli V., Ellena M., Lamesso E., Ledda A., Marras S., Mercogliano P., Monteleone L., Mysiak J., Padulano R., Raffa M., Ruii M.G.G., Serra V., Villani V., 2021. "Analisi del rischio. I cambiamenti climatici in sei città italiane". DOI: 10.25424/cmcc/analisi_del_rischio_2021
Schiappacasse, Paulina. (2018). Operationalizing Urban Resilience—Learning from the Past while Preparing for the Future. The Case of Dresden, Germany.
Beceiro Paula, Salgado Brito Rita, and Galvão Ana. 2020. "The Contribution of NBS to Urban Resilience in Stormwater Management and Control: A Framework with Stakeholder Validation" Sustainability 12, no. 6: 2537. 7
LABSUS, Rapporto 2024" Ambiente e comunità" ISBN 979-12-210-8629-4 – Mappa a cura di Francesco Fiermonte, Politecnico di Torino, Dipartimento DIST , Laboratorio S3+LAB