The need for decision-support tools to promote dynamic and robust management of climate change in cities

RESIN
SUPPORTING DECISION – MAKING FOR RESILIENT CITIES

- The IPCC Fifth Assessment Report (2014) and the EU Strategy on Adaptation to Climate change (2013) highlighted the potential for developing local-level adaptation measures and mainstreaming these.

- The process of adaptation planning is a complex and multifaceted issue, which changes according to where and when it occurs, and on whom is adapting to what.

- What constitutes 'effective' adaptation, and how various actions will materialise in changes to diverse social, economic and ecological systems.

- Addressing this support decision-making by facilitating the comparison between both natural and socio-economic or institutional responses undertaken by various types of stakeholders (i.e. individual or collective actors, private or public agents).

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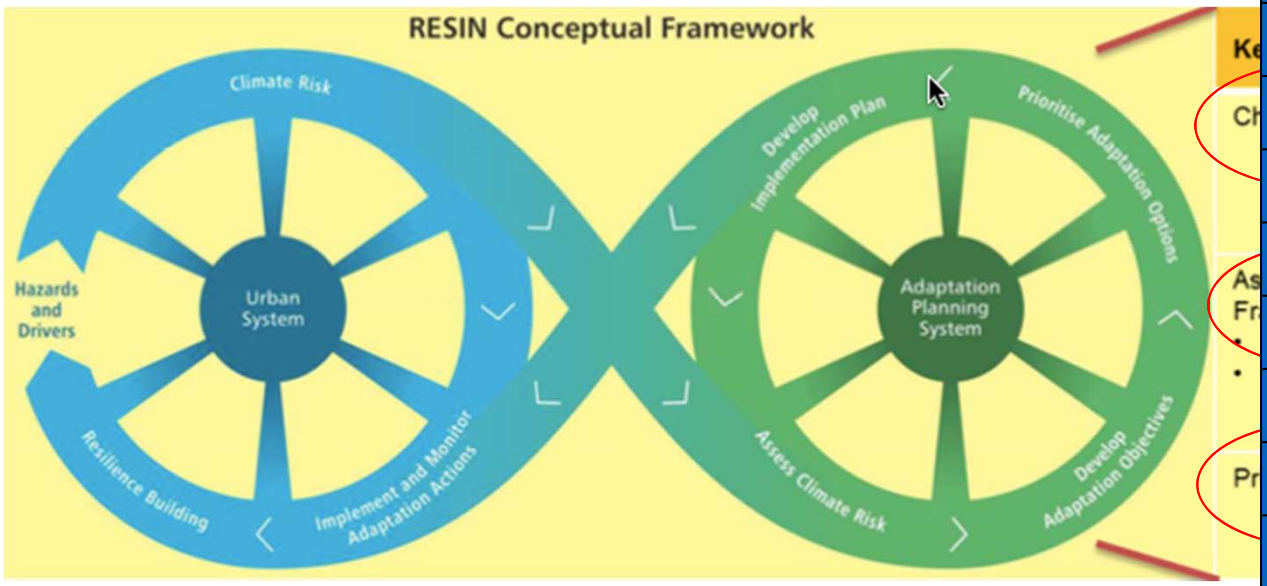
Climate REsilient CitieS and INfrastructure (RESIN)

RESIN is a Research and Innovation Action funded under call
investigates climate change adaptation practices in European c
vulnerability in order to develop standardised methodologies a
cities can use to develop local adaptation strategies

The RESIN Conceptual Framev



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RESIN aims & objectives:

- To build on previous research by combining existing approaches to climate change adaptation and disaster risk management and accounting for all core elements of the urban system and the ways in which they interrelate.

- Move past local, city-specific approaches to climate change adaptation and towards developing central frameworks to facilitate local adaptation planning.

- Work with European standardisation organisations with a view of contributing to the formal standardisation of adaptation tools and approaches.

- To facilitate knowledge and capacity sharing between cities by developing an urban typology to characterise European cities.

RESIN Approach:

To meet the objectives of the project, the RESIN approach is reliant on 2 key processes, related to:

1. The Co-Creation of Tools

In order to co-create the RESIN methodologies and tools, and to ensure that these are tailored to cities' needs, the project's research organisations are working in close partnership with the project's 4 core cities:

- **Paris**
- **Manchester**
- **Bratislava**
- **Bilbao**

2. Evaluation and Testing

The cooperation between RESIN organisations and cities allows for immediate testing and evaluation of tools. The effectiveness and outcomes of the pilot testing of the tools will help cities to analyse and characterise their current processes and policies related to climate adaptation

How BC3 is contributing to RESIN:

1) The standardisation and harmonisation of the evidence-base related to various adaptation options and the design of decision-support tools for adaptation planning (WP3),

- To standardise knowledge on adaptation options by means of a comprehensive characterisation of the adaptation measures that have been designed and applied in diverse urban settings.

- To develop standard and operational methodologies to design and implement adaptation portfolios at the city-level.

and;

2) The practical testing, application, and assessment of these tools in the case study regions (WP4)

- To standardise knowledge on adaptation options by means of a comprehensive characterisation of the adaptation measures that have been designed and applied in diverse urban settings.

HARMONISATION	VARIABLES	DESCRIPTION
PROCESS	**Geography**	Climatic region(s) to which the option can be applied
	Study Location_City	The place where the study has been carried out
	Scale	Scale of implementation of the option
	Scenario_Climate	Describes the type of climate scenario considered
	Scenario_Economic	Describes the type of economic scenario considered
	Cost_Expression	Identifies the type of direct and indirect costs considered (fixed, variable) and the components it considers (i.e. construction, O&M, administrative)
	Benefit_Expression	Identifies the type of benefit considered (monetary, environmental, social, health)
	Co-Benefit_Valuation	Identifies whether non-market valuation methods have been applied (benefit transfer, CVM etc.)
Examples of the types of processes considered in the harmonisation process		

Example 2: Developing an specific case study (BILBAO) to better understand mental health impacts of flooding

BC3 has commissioned a survey to 300 households in great Bilbao area :

1. **Questions on General Health Questionnaires (GHQ)**

   Depend on (a) hazard rate (velocity and depth), (b) prevention pre: warning, post: insurance, (c) time and experience, (4) damage.

2. **How can we build resilience?**
3. **Other issues related to Willingness to Pay to avoid these impacts.**

Example 3: Developing framework for adaptation tracking and measurement at city level

Review of existing adaptation tracking studies at local level:

1. Development of an evaluation framework.
2. Identification of common practices, caveats, lessons learnt… etc. in relation to concepts and methods.
3. Development of a local public policy credibility index.

Theoretical reflection on the idea of adaptation metrics and the "baseline" concept:

1. How to set it.
2. Potential particularities given different contextual needs or goals (e.g. Developing vs. Developed).

THANK YOU FOR YOUR ATTENTION!

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