ECCA

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Assessing planning progress: The quality of Urban Adaptation Plans in Europe

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The research framework

- **Since 2010, the EURO-LCP initiative has been studying the status, quality, adequacy, progress and effectiveness of local climate planning (mitigation and adaptation) and disseminating its results.**

- **The main objective is to collect information and generate knowledge to improve the quality of local climate planning and promote the implementation of climate actions for wider urban resilience and sustainability in Europe.**

RESEARCH QUESTIONS:

- ***Are European cities learning and improving their abilities to plan for adaptation over time?***

- ***How can the quality of adaptation plans be measured?***


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Quality of urban climate adaptation plans over time

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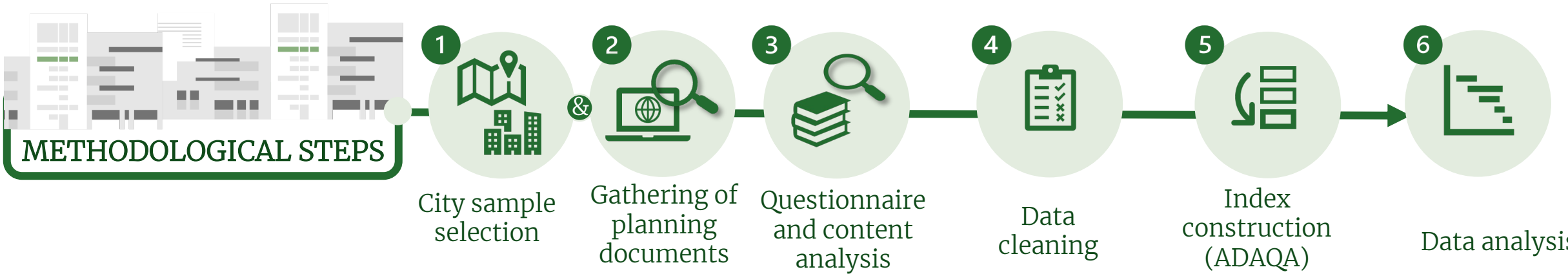
Abstract

Defining and measuring progress in adaptation are important questions for climate adaptation science, policy, and practice. Here, we assess the progress of urban adaptation planning in 327 European cities between 2005 and 2020 using three 'ADAptation plan Quality Assessment' indices, called ADAQA-1/ 2/ 3, that combine six plan quality principles. Half of the cities have an adaptation plan and its quality significantly increased over time. However, generally, plan quality is still low in many cities. Participation and monitoring and evaluation are particularly weak aspects in urban adaptation policy, together with plan 'consistency'. Consistency connects impacts and vulnerabilities with adaptation goals, planned measures, actions, monitoring and evaluation, and participation processes. Consistency is a key factor in the overall quality of plans. To help evaluate the quality of plans and policies and promote learning, we suggest incorporating our ADAptation plan Quality Assessment indices into the portfolio of adaptation progress assessments and tracking methodologies.

Reckien D et al. 2023 Quality of urban climate adaptation plans over time *npj Urban Sustain* 3 1–14 https://doi.org/10.1038/s42949-023-00085-1

Method


METHODOLOGICAL STEPS
1
City sample selection
&
2
Gathering of planning documents
3
Questionnaire and content analysis
4
Data cleaning
5
Index construction (ADAQA)
6
Data analysis

Method

1 Sample selection

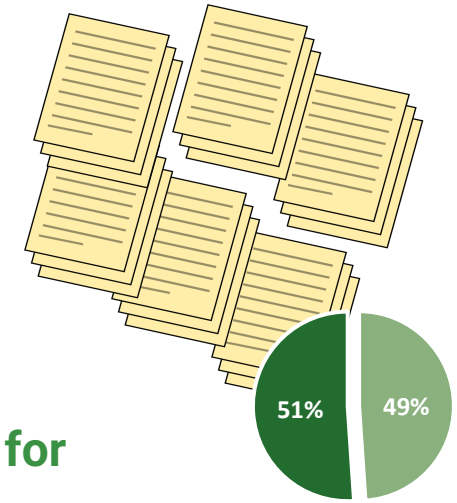
2 & Gathering of planning documents

327 European cities (cities of the former EU-28 as in *Eurostat's City statistics database*, formerly known as Urban Audit database)

The City statistics database (Urban Audit)

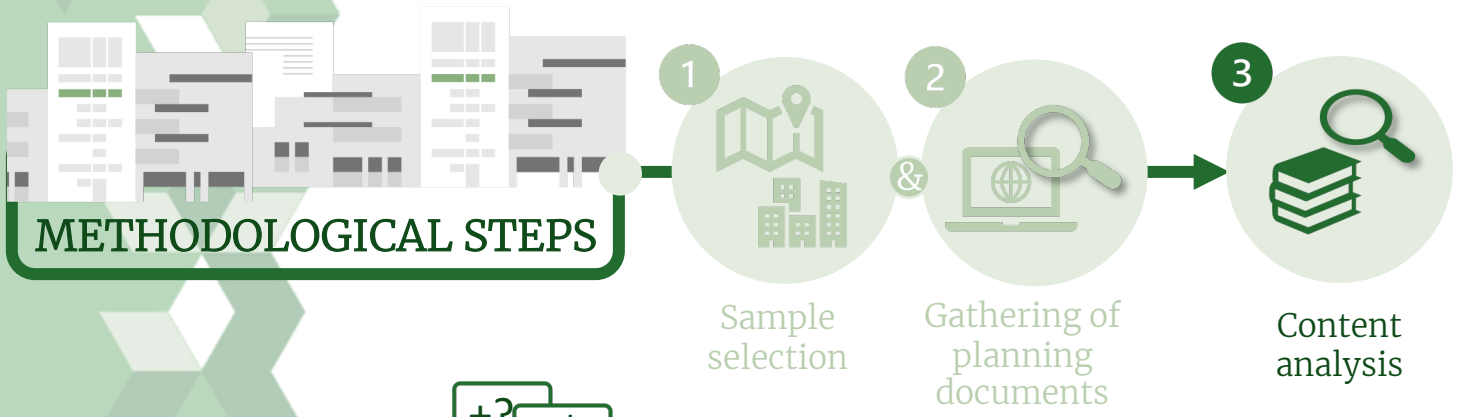
Native research analysts for each country

- online search by keywords



167 local adaptation plans of European cities

Method



The questionnaire was organized into **7 categories** corresponding to **quality principles** based on the **scholarly literature** and **practitioner guidelines**.

Questionnaire

General info on the LCAP	1. Name of the Country
	1.1 Does the country have a national adaptation plan or strategy?
	1.2 Name of the city that you analyze
	1.3 Is there a national, regional, or local obligation/ climate law that demands local municipalities to develop LCAPs? Tick only when municipalities are demanded to act.
	1.4 Name(s) of the Local Climate Change Adaptation Plans and Strategies (LCAPs) considered. Please name all titles of documents that you find and analyze, separated by semicolon.
	1.6 Where did you find the plan?
	1.7 If online save the plan and paste all the relevant web addresses here, separated by a semicolon
	1.9 Provide the year of adoption, approval (and/ or publication) -- earliest year when more plans are available; UPDATED
Impacts and risks	2.1 General CC impacts/ risks: Does the plan include a discussion of the global or national impacts/ risks of CC?
	2.2 Specific CC impacts/ risks: Does the plan include a discussion of the specific impacts of CC to the jurisdiction and, if yes, related to which timescale?
	2.3 Specific CC impacts/ risks: Which impacts, if any, are identified in the jurisdiction?
	2.4 Equity/ justice of impact/ vulnerability assessment: Does the plan identify certain population groups that are/ will be particularly impacted by CC and, if yes, which ones?
	2.5 Does the plan identify certain industries, if any, that are/ will be particularly impacted by CC?
Goals	3.1 Specific adaptation goals: Does the plan identify at least one concrete adaptation goal to a particular CC impact/ risk and, if yes, to which impact/ risk? Please note, this is about goals, not measures. (e.g. we want to reduce the casualties during heat/ storm)
	3.2 Quantitative adaptation goals: Does the plan identify at least one quantitative adaptation goal? If yes, specify
Industries and sectors	4.1 Buildings (and related land use planning): Does the plan include at least one measures in the building sector and, if yes, which ones?
	4.2 Transport: Does the plan include at least one measure on transportation and, if yes, which ones?
	4.3 Energy: Does the plan include at least one measure on energy and, if any, which ones?
	4.4 Water: Does the plan include at least one measure related to water management and, if yes, which one?
	4.5 Waste: Does the plan include at least one measure on waste management?
	4.6 Agriculture and forestry: Does the plan include at least one measure on food security and agriculture and, if any, which ones?
	4.7 Environment, greenery and biodiversity: Does the plan include at least one measure on resource management, green infrastructure and ecosystem services and, if any, which ones?
	4.8 Health: Does the plan include at least one measure on the social and environmental determinants of health or social care provision systems and, if any, which ones?
	4.9 Social and educational institutions and services: Does the plan include at least one measure on social institutions and, if yes, which ones?
	4.10 Civil protection and emergency: Does the plan refer to the development or use of disaster response systems?
	4.11 Tourism: Does the plan include at least one measure related to tourism?
	4.12 Industries/ economies/ businesses/ financial institutions: Does the plan include at least one measure for particular industries?
	4.13 Equity/ justice: Are specific population groups mentioned in relation to any of these measures above?
Implementation	5.2 Priority: Does the plan prioritize certain actions for implementation and, if yes, how?
	5.3 Responsibility: Does the plan identify a responsible party for at least one specific adaptation measure?
	5.4 Timelines: Does the plan identify timelines for implementation?
	5.5 Budget: Does the plan include considerations of human and financial resources required and/or a budget for implementation?
M&E	6.1 M&E: Does the plan include a section or separate plan that describes the envisaged M&E activities?
	6.2 Responsibility: Does the plan identify responsible parties for M&E and, if yes, which ones?
	6.3.1 Objectives
	6.3.2 Indicators
	6.4 Timeline: Does the plan include a timetable for M&E?
	6.5 Equity/ justice: Does the M&E process consider assessing the outcome of adaptation on population groups and, if yes, which ones?
Particip.	7.1 Participation: Does the plan identify the organizations and stakeholders involved in the plan making process and, if yes, which ones?
	7.2 Participation, equity/ justice: Is there mentioning of particular population groups being involved/ heard during the plan making process, if any?

40 - Total number of indicators/questions

Method

METHODOLOGICAL STEPS

1 City sample selection

2 & Gathering of planning documents

3 Questionnaire and content analysis

4 Data cleaning

36 people were involved in the coding.

risks of discrepancies and subjective interpretations of the data

Check of the interrater reliability

The topic V. Monitoring and Evaluation was rechecked by one team member not involved in the original coding

A number of columns and cases were cross-checked by other authors

Reliability of 91%

deviation of 15 data points, (i.e. 15 coded entries of 167 data points in total were corrected)

Method

METHODOLOGICAL STEPS

1 City sample selection

2 & Gathering of planning documents

3 Questionnaire and content analysis

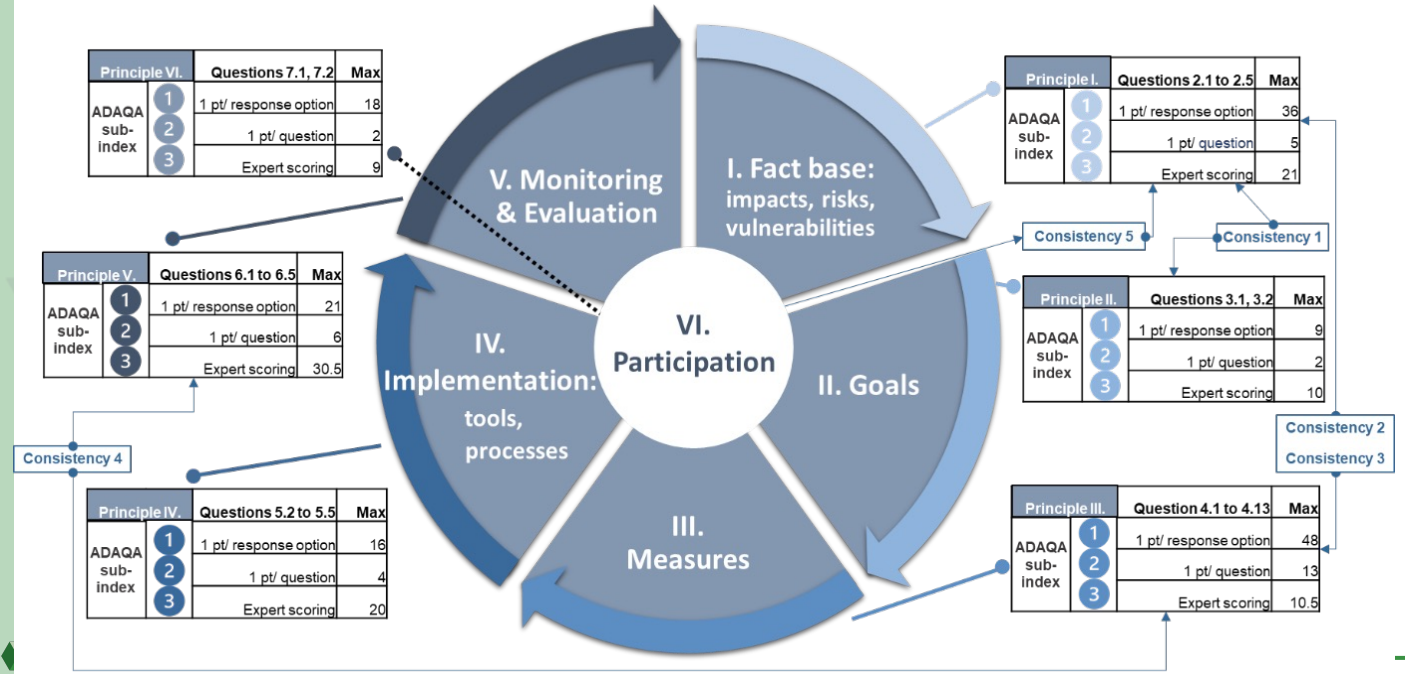
4 Data cleaning

5 Index construction (ADAQA)

Plan quality is defined as the strengths of plans assumed to lead to effective implementation and reduced tradeoffs and maladaptation.

The ADAptation plan Quality Assessment index: the ADAQA index

The **ADAQA** index is based on **six well-established plan quality principles**



Three different indices were developed:

- ADAQA-1: one point per response option—representing depth and detailedness.
- ADAQA-2: one point per question in the questionnaire, focussing on breadth, particularly adaptation measures (the principle with largest number of questions).
- ADAQA-3 uses complex heuristics and our expert judgement, stressing the need for consistency between different parts of the plan.

Method

METHODOLOGICAL STEPS

1 City sample selection

2 & Gathering of planning documents

3 Questionnaire and content analysis

4 Data cleaning

5 Index construction (ADAQA)

6 Data analysis

Several statistical tools were adopted to analyse data collected:

- Descriptive statistics to explore the state and quality of adaptation planning;
- Linear regression to unearth a potential statistical relationship between average of plan quality per year across years 2005 and 2020 (interpolating for the years 2006 and 2007),
- One-way ANOVA with Tukey Kramer Multiple Comparison Post-Hoc tests to determine a statistical difference of plan quality across groups of older, medium-old, and recent plans.
- All hypothesis tests (linear regression and ANOVA) are two-sided. We used IBM SPSS Statistics, Version: 28.0.1.0 (142) for data analysis.

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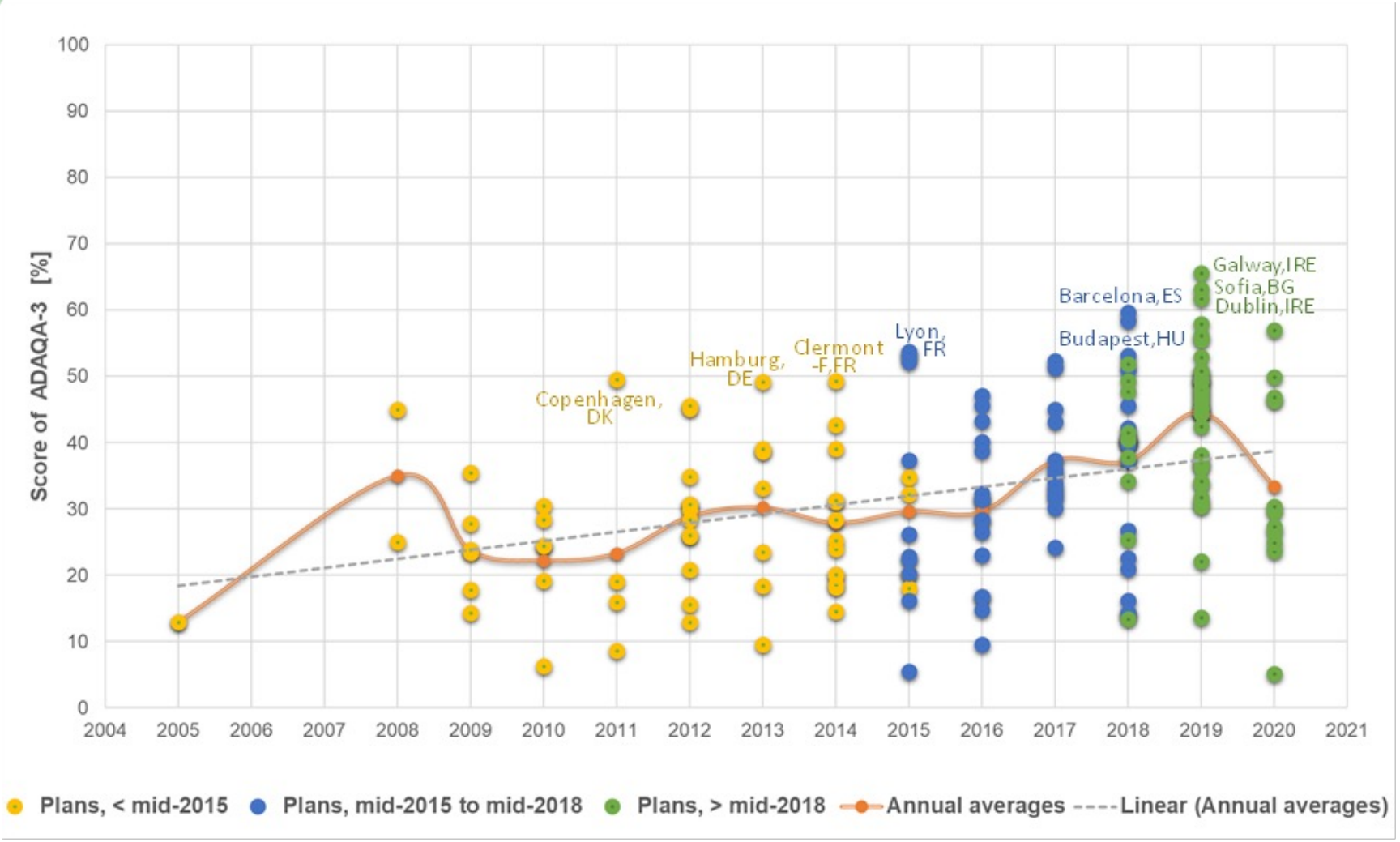
MAIN FINDINGS

Results

Finding#1: Urban climate change adaptation Plan Quality in European cities is increasing from 2005 to 2020, by about 1.3 points/ year.

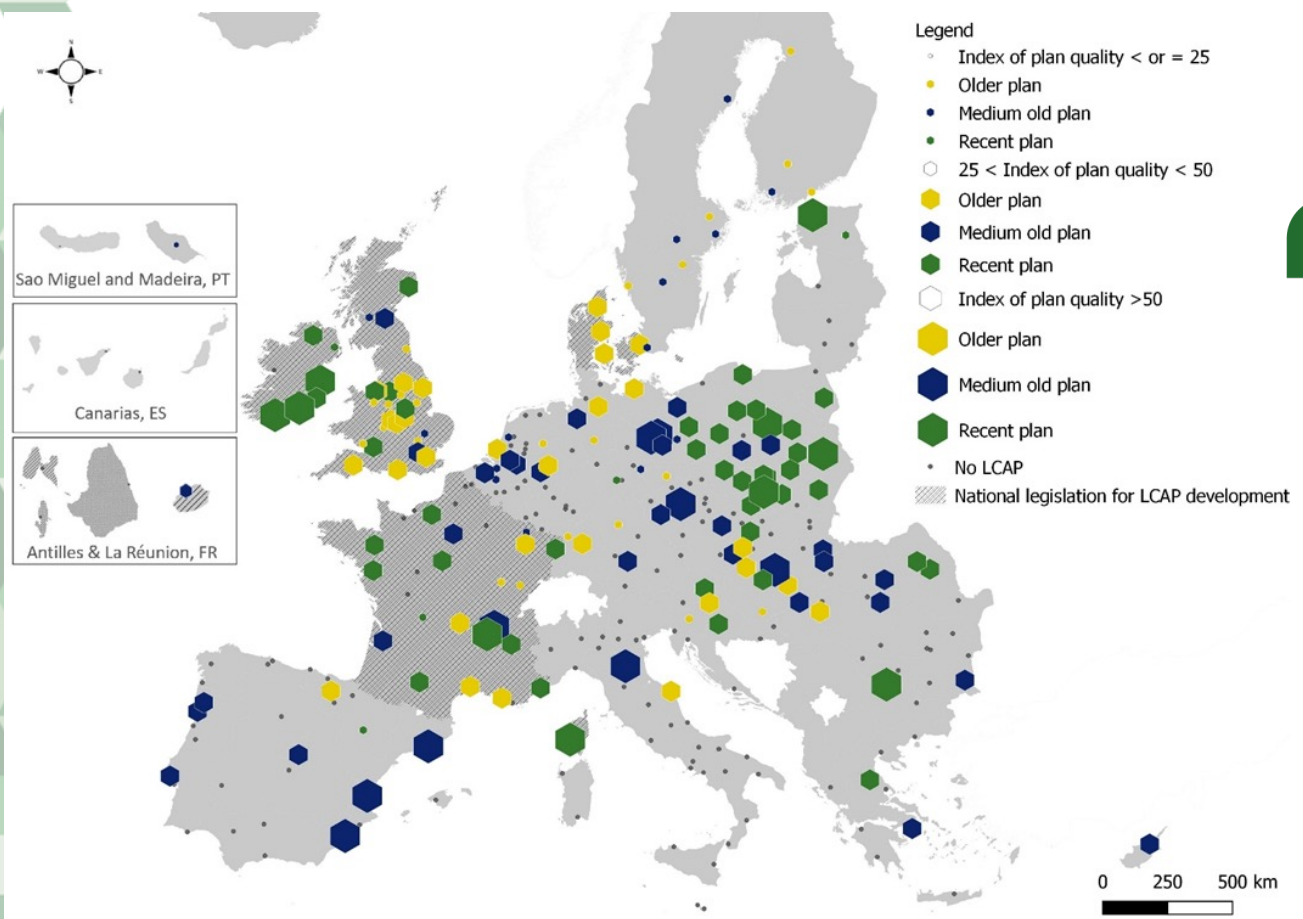
Over time



Results

Finding#2: Newer plans, which are higher in quality, are mainly found in cities in Ireland, France, and Eastern Europe, in particular Poland. But there are also some good plans before 2018, spread across Europe, mostly in larger cities.

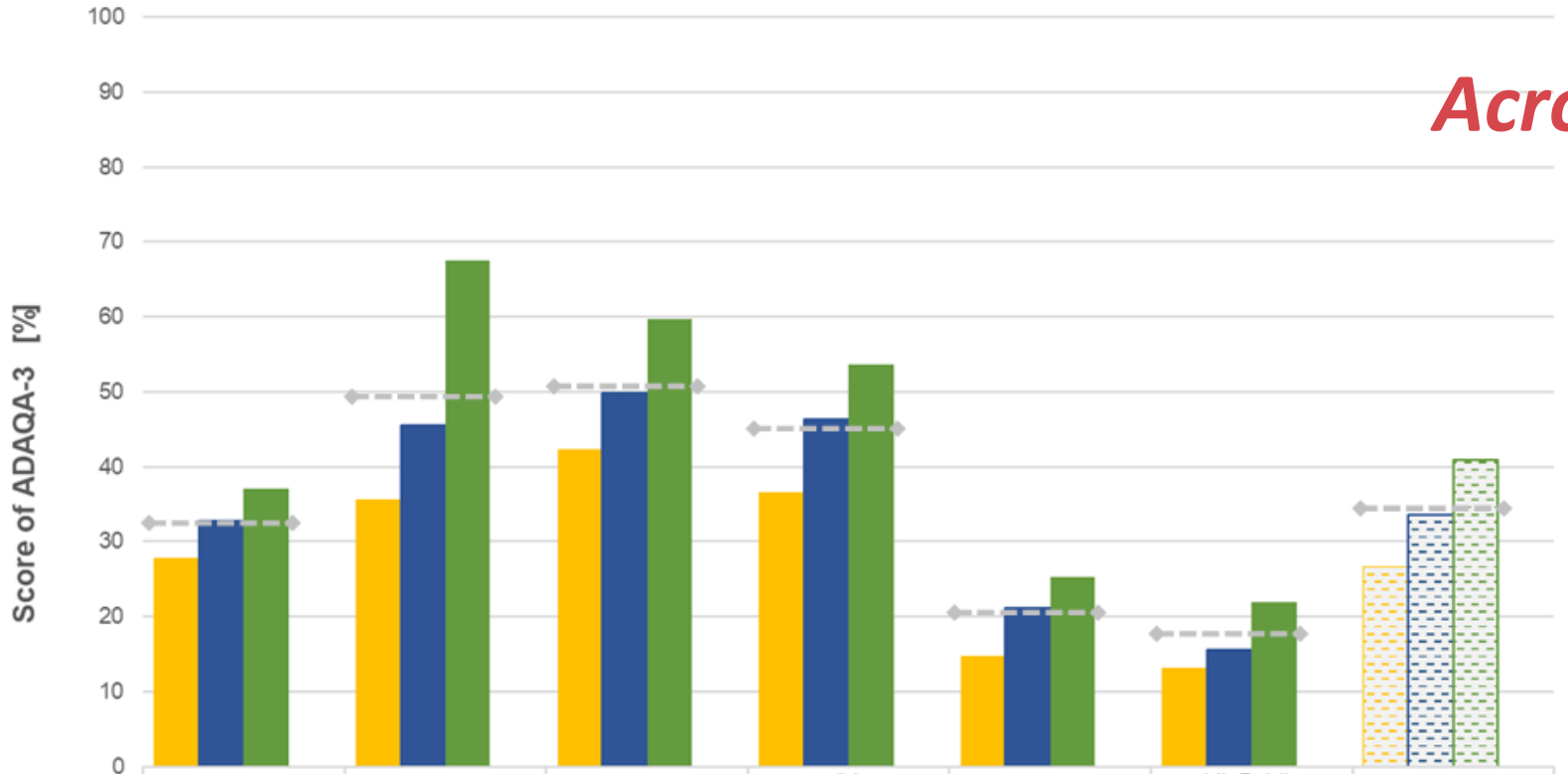
Over time



> Top-ranking cities are Sofia (BG), Galway (IE), and Dublin (IE).

Results

Finding#3: Across principles of climate change adaptation plan quality, specifying adaptation goals improved most in recent plans.



	I. IMPACTS, risk & vulnerability	II. Adaptation GOALS	III. Adaptation MEASURES	IV. IMPLEMENTATION tools & process	V. MONITORING & Evaluation	VI. Public PARTICIPATION in plan creation	Average of termporal group
Plans, < mid-2015	27,82	35,72	42,40	36,60	14,79	13,17	26,67
Plans, mid-2015 to mid-2018	32,80	45,60	49,87	46,32	21,11	15,51	33,52
Plans, > mid-2018	37,10	67,48	59,78	53,73	25,23	22,00	40,91
Average	32,58	49,60	50,68	45,55	20,38	16,89	33,70

Across components

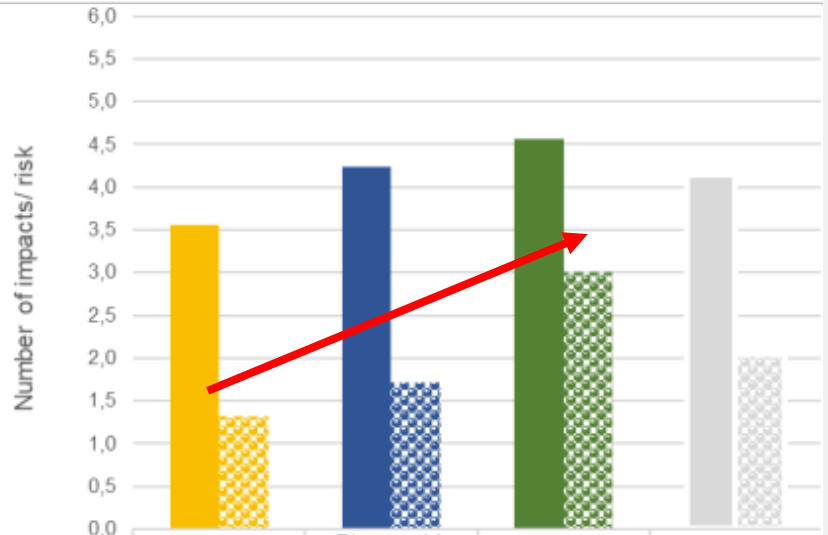
Monitoring & evaluation, and Participation is generally low.

Results

Finding#4: Adaptation plans are consistent to a degree between impacts of/ risks to specific hazards and adaptation goals and impacts of/ risks to industries and measures.

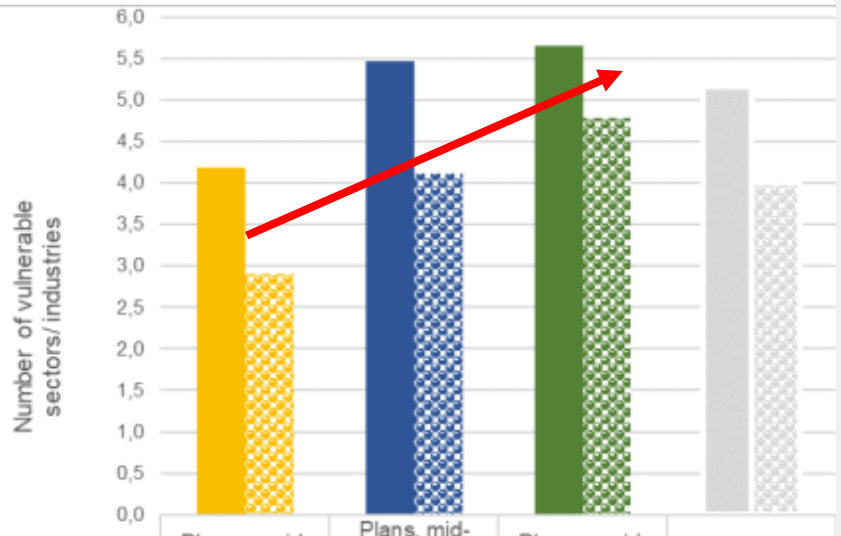
Consistency

a) Consistency 1- Alignment of impacts/ risks and adaptation goals



	Plans, < mid-2015	Plans, mid-2015 to mid-2018	Plans, > mid-2018	Average
Mentioned in impact section	3,6	4,2	4,6	4,1
Addressed via goals	1,3	1,7	3,0	2,0

b) Consistency 2 - Alignment of impacts/ risks for vulnerable sectors/ industries & adaptation measures



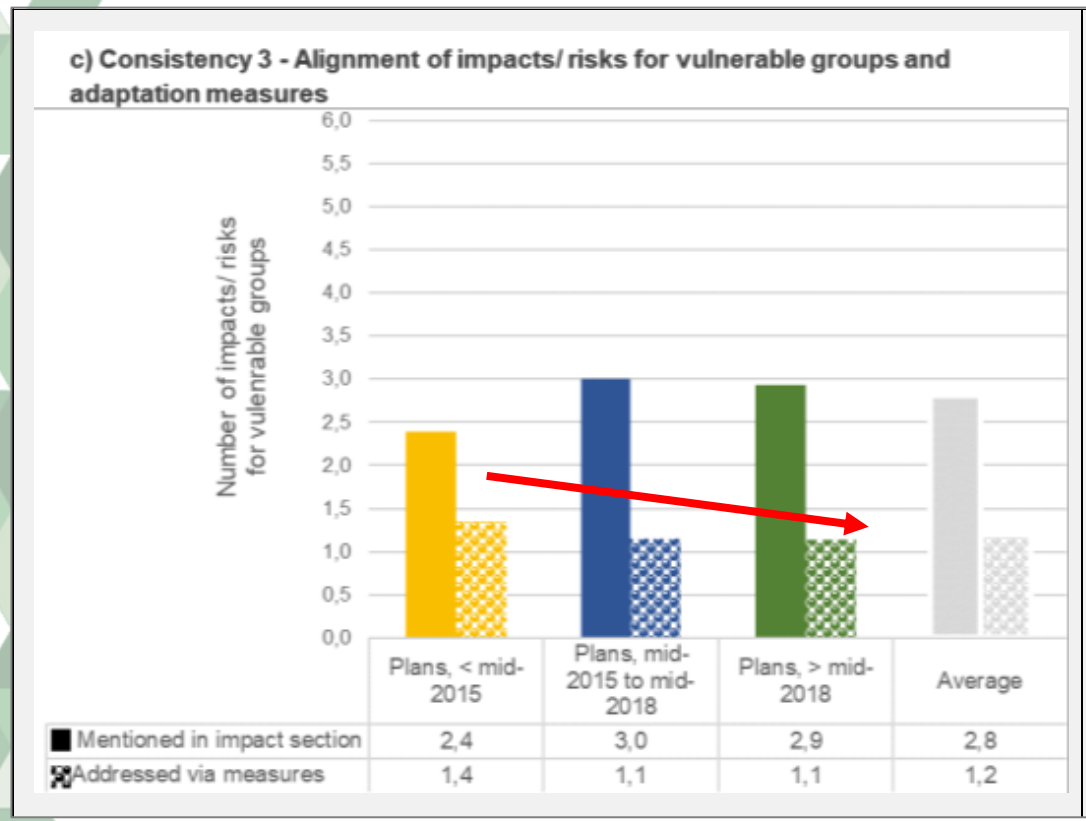
	Plans, < mid-2015	Plans, mid-2015 to mid-2018	Plans, > mid-2018	Average
Mentioned in impact section	4,2	5,5	5,7	5,2
Addressed via measures	2,9	4,1	4,8	4,0

Results

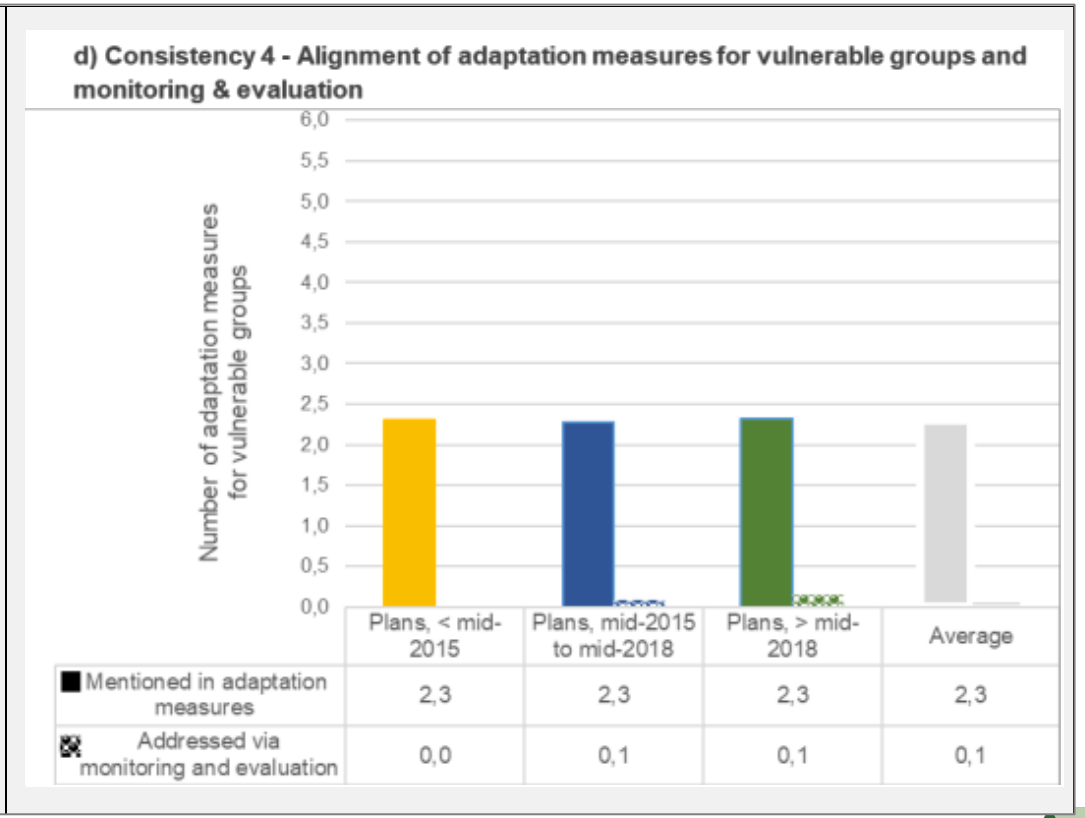
Finding#5: We are missing out on focusing on people most in need.

Consistency

Consistency decreased over time when looking at impacts on vulnerable groups and measures. Consistency between measures for vulnerable groups and M&E and impacts on vulnerable groups and participation is very low.



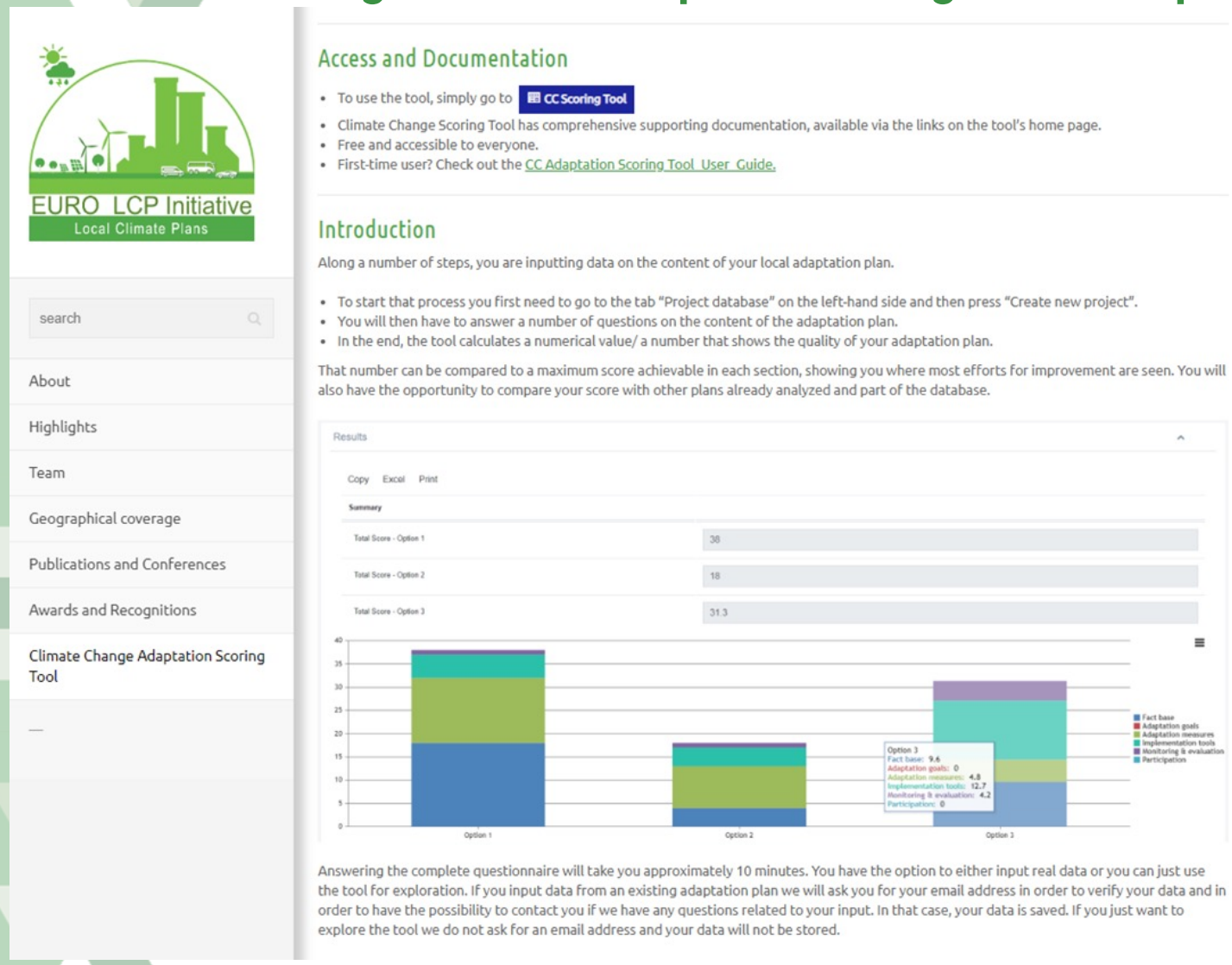
	Plans, < mid-2015	Plans, mid-2015 to mid-2018	Plans, > mid-2018	Average
Mentioned in impact section	2,4	3,0	2,9	2,8
Addressed via measures	1,4	1,1	1,1	1,2



	Plans, < mid-2015	Plans, mid-2015 to mid-2018	Plans, > mid-2018	Average
Mentioned in adaptation measures	2,3	2,3	2,3	2,3
Addressed via monitoring and evaluation	0,0	0,1	0,1	0,1

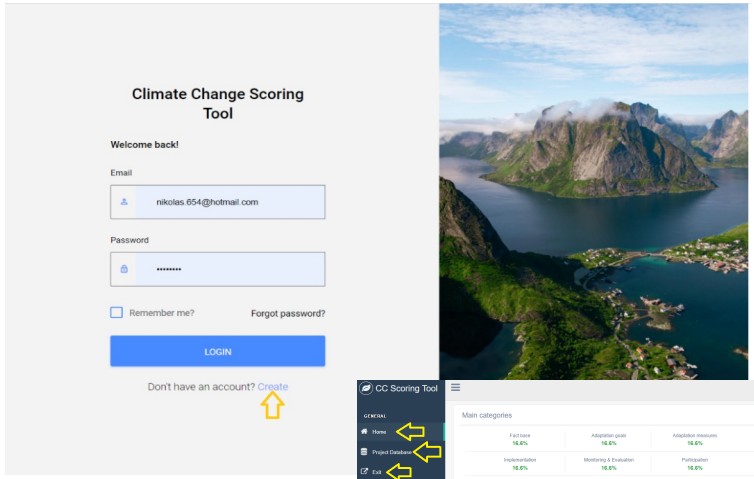
Results

Finding#6: We developed a scoring tool to help decision makers and practitioners



Our scoring tool can assess/calculate the adaptation plan quality score of any city by inputting plan content along a questionnaire.

www.lcp-initiative.eu/



Summary of findings and policy recommendations

Quality of local adaptation plans in Europe

European cities have improved in their abilities to plan for adaptation. These improvements may come about through processes of collective learning, knowledge transfer, capacity building, transnational networks and other types of science-policy collaborations.

However, most local governments are still not considering the needs of vulnerable people, nor involving them in policy formulation or monitoring whether adaptation measures reduce their vulnerability to climate threats. This is something that we regard as **necessary for a good adaptation plan** in order to make sure adaptation works for people most in need of it.

Establishing adaptation goals is still a challenge which links with the lack of detail on monitoring and evaluation systems: ***how can we know how well we are doing if we don't know yet where we want to go?***

Conclusions and further developments

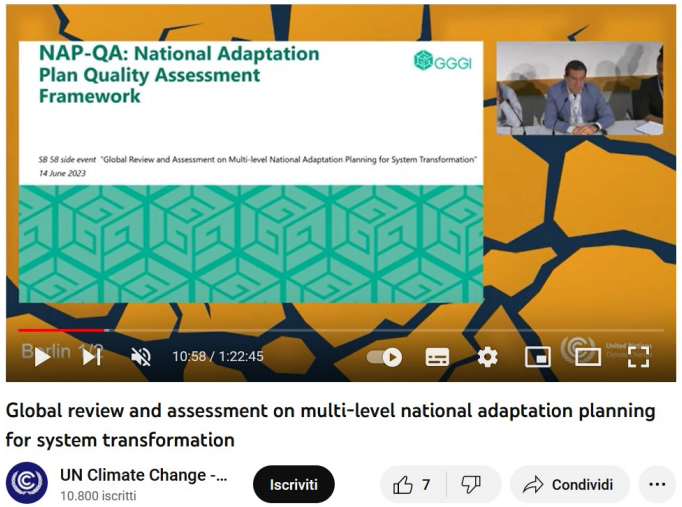
Global Green Growth Institute

We are collaborating with GGGI to build an evaluation framework based on our ADAQA index to “measure” quality of National Adaptation Plans of developing countries: the NAP-QA - National Adaptation Plan Quality Assessment Framework

Credit: UN Climate Change

Ultimate objective will be to provides essential guidelines and recommendations for developing good quality, robust and implementable NAPs.

Preliminary results of a global review and assessment of developing countries’ national adaptation plan (NAPs) using the NAP Quality Assessment framework was presented last week during the **Bonn Climate Change Conference** at the Side event: *Global review and assessment on multi-level national adaptation planning for system transformation*.



https://www.youtube.com/watch?v=9tVlpoMJ3iI

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Thank you for your attention

Questions and comments are welcome

References to our work

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