



**Appendix 2: Survey** *Adaptation Strategies for European Cities: Final Report* 

This is part of the Final Report of the project "Adaptation Strategies for European Cities" which has been compiled by Ricardo-AEA for the European Commission Directorate General Climate Action

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# **RICARDO-AEA**

## **Appendix 2: Survey**

Adaptation Strategies for European Cities: Final Report













**Report for** EC - Directorate General for Climate Action

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## 1 Concept

The concept for the survey was to provide a high level assessment on the state of play on adaptation across Europe cities and capacitates to respond.

### 1.1 Aim

The survey was aimed at informing the design of the Typology (Sub-task 1.1.2), the selection of cities for Tasks 2 and 3 and to start building the evidence base for the final deliverables. In particular, it was designed to provide the following information:

- State of play of cities in preparing for adaptation.
- An overview of adaptive capacity, including cities' awareness.
- An overview of training needs.

## 2 Approach taken

### 2.1 Development of the questions

The starting point for the online survey is provided from the proposal in the table below.

The team added an initial additional section about the respondent to qualify the response, added a new area under the self-assessment section on knowledge exchange, and an experience and engagement section to help qualify peer cities and assigned partners to help with the development of the questions in certain sections.

**Table 1 Survey question template** (updated in italic text post-proposal and a new column added assigning responsibilities for development of the questions)

Introduction	partner	Explanation	Reason
introduction /	AEA	Describes the project and the benefits of participating.	Provides context of project and aims to engage participants.
About You	AEA	Captures information about the respondent, the organisation/city they work for, and whom they are representing (compulsory completion)	To avoid gathering bogus answers if registered access is not given (publically available) and to help us to identify city administrations from the outset.
Context	AEA	High level questions on non-climate context, e.g.:  Location City administration.	Useful for classifying cities using the typology in Task 1.1 In addition, this will help to assess the context within which adaptation actions are taken and how far these facilitate or impair the taking of adaptive actions.
Self- Assessment	ABL/ICLEI	We will ask a very small sample of self-assessment questions (e.g. two). The principal areas of enquiry will be on adaptive capacity self-assessment and we will test an early version of the typology classification in the survey. For example:  • Adaptive capacity: Various stages of capacity will be described (based on the PACT response levels¹ but using simplified language). Respondents will be asked to score themselves against the descriptions (or to indicate where they feel unable to assess their own organisation's capacity). This will indicate where cities believe themselves to be in terms of capacity.  • Knowledge exchange: We will	This will help to provide valuable city-level information on both adaptive capacity and state of play, as per the requirements of the ITT referenced in the Sections below.

<sup>&</sup>lt;sup>1</sup> See Appendix 10 for a summary of the 'response levels' identified in the PACT tool.

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Section	Responsible partner	Explanation	Reason
State of Play	UoM / ICLEI /	ask the cities what predominant category they think would be the most beneficial to engage with e.g. by population size, governance, political position, geographical location, climate impacts or vulnerabilities, adaptation themes, and adaptation planning status.  We will distinguish questions on the	To meet the requirements of the
State of Flay	ABL	state of play of adaptation using the categories: process, output and outcomes.  • Process concerns the approach taken to the development of adaptation strategies, and the factors influencing this process  • Output relates to the format and content of the adaptation strategy produced, including its status <sup>2</sup> • Outcome encompasses issues arising from the development and implementation of the adaptation strategy.  This model has been used successfully by the UoM in the GRaBs project to assess the state of play of adaptation in cities via surveys, including an analysis of the C40 group of cities.	"The state of play of cities in preparing for adaptation to climate change. This should give an overview of which EU cities are developing or have an adaptation strategy, the stage of implementation, (and) the approach of the strategy"
Capacity	ABL	Our questions on capacity will build on the above and will be structured in line with the PACT adaptive capacity framework, which provides a theoretically robust, tried and tested assessment method. The process will include questions on specific elements of adaptive capacity, such as <sup>3</sup> :  • Awareness of climate adaptation issues, evidence, tools, etc.  • Spheres of responsibility of the responding authority  • Expertise available to the responding authority (in-house or contracted)  • Networks of stakeholders and partners to assist and contribute to adaptation.	To meet the requirements of the ITT (p3):  "The capacities to respond to adaptation needs" and  "[Assess] the awareness about adaptation to climate change".
Training Needs	ICLEI/adelphi		To meet the requirements of the ITT (p3): "This should give an overview of whether there are cross-

For example: on the agenda/ in preparation/ draft consultation/ fully adopted strategy.
 The specific categories investigated and questions asked may differ slightly from those listed here so as to fit comfortably within the overall survey document.

Section	Responsible partner	Explanation	Reason
		such a question can only identify 'known unknowns' and that a thorough assessment of training needs, which matches the urgency and size of risks posed with the capacities of the city authority to adapt, will be undertaken in Task 3 to define training requirements.	and cooperation between cities
Support	AEA	A specific question on the national and regional framework of policies, guidance, support, data and partnerships that relate to adaptation at the city level.	ITT (p4): "The contractor should also take
Engagement and experience	ICLEI/AEA	Questions will be included in regard of the willingness and capability to get involved with supporting other cities. Questions would refer to involvement with related processes and networks, commitment to peer support.	Task 3 Selection of Peer Cities

### 2.2 Development of the online survey

In order to develop the survey rapidly after project inception the proposal offered to use 'LimeSurvey', a tool that offers a free and secure system for designing an online survey of the type envisaged here. AEA's IT team have previously constructed various successful surveys using this tool in the past. At the request of the EC the survey was developed using the EC's IPM tool "Your Voice in Europe".

The final questions were developed in consultation with the consortium partners and the EC Project officer. The process followed is shown in Table 1 below and the final questions are provided in Appendix 1.

Table 2 Development of questionnaire

Activity	By who	Timescale
First draft of the survey outline of proposed launch timeline and its success criteria building on Table 3.6 from the proposal (example survey template) and responsibilities for development of the questions were assigned to relevant partners	AEA	From 1 February 2012
Review the draft document and provide input on:  the proposed launch timeline the success criteria of the survey preliminary questions development of further the questions and their format bearing in mind the success criteria.	Partners and AEA	8 February 2012
Prepared fist full draft of the survey questions from the partners, and using a professional editor to ensure questions were clear and not leading the respondent.	AEA	9-13 February 2012
First draft of survey (ASEC_1 2 2 Survey_draft Qs_v3) sent to	AEA	13 February 2012

Activity	By who	Timescale
EC		
Feedback provided by EC (and Project Partners) at Kick-off meeting in London	EC / AEA	21-22 February 2012
Survey revised based on discussion with EC and Project Partners and circulated for final feedback	AEA	27 February 2012
Feedback from EC provided	EC / AEA	29 February 2012
Access provided to IPM tool for constructing questionnaire	EC	3 March 2012
Construction of questionnaire*	AEA	9 March 2012
Final revisions and testing	AEA and various calls and emails to EC	17 April 2012
Final debugging  *This step took ever 4 working days to complete compared to see	AEA and various calls and emails to EC	17- 20 April

<sup>\*</sup>This step took over 4 working days to complete compared to our experience of using Limesurvey (a few hours) and the advice given to us by EC's Project Officer (also a few hours).

The survey was activated on 20 April 2012 with an initial closure date of 29 May 2012. This was accompanied by a launch Letter from EC DG Climate Action to the Adaptation Steering Group Members. A launch email was sent by ICLEI using their mass mailing service.

The following key steps were then carried out to complete this task:

- Weekly tracking of completions of questionnaire, Member State and biogeographical coverage, and based on the results of this tracking, efforts will be made to boost respondent levels in underrepresented areas as required.
- Mass mailing reminder to encourage cities to complete the survey:
- Preliminary analysis of the results to inform the Stakeholder dialogues using the automated IPM tool analytics as well as providing initial assessments where needed on the questions that relate specifically to the stakeholder dialogues;
- Full analysis of the results following the extension of the survey deadline to after the Ancona Stakeholder Dialogue meeting (11 July 2012), draft final of full analysis to be completed by AEA by 24 July and provided to project team for consideration and use in Task 1 synthesis report.

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## 3 Findings from the analysis

### 3.1 Survey tracking

#### **Tracking Progress**

It is planned that the survey will be 'live' and available for completion for five weeks. During the first five weeks of the survey weekly tracking of progress was undertaken covering:

- Total completions
- Respondent type (general public, representative of city government, other stakeholder organisation)
- Member State coverage
- City coverage
- Bio-geographical coverage
- Whether the city in question has begun work on climate adaptation
- Whether the city has an adaptation strategy
- Whether the respondent is willing to take part in this project (total)
- Whether the respondent is willing to take part in this project by Member State
- Whether the respondent is willing to take part in this project by Bio-geographical coverage

This data is provided as a count (number of respondents) and, where appropriate, percentage of total responses to date (see Table 3 below). Based on the results of this tracking, efforts were made to boost respondent levels in underrepresented areas as required.

**Note:** The tables show the results tracking of all the survey responses not just the potential valid city results.

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Table 3 Survey tracking results

		Week ending 27/04/12		Week 6 04/0		Week 6		Week ending 18/05/12		Week e 25/05	
		Count	%	Count	%	Count	%	Count	%	Count	%
EU27 city tracking	]										
Total completions	Total number	20		36		69		87		113	
EU27 City coverage	Total responses from EU27 cities (excluding duplicates)	19		30	-	55		68		88	
	Number of duplicates	0		2		2		3		5	
Non-EU city	Exclude from analysis	0		2		3		3		4	
responses	Possibly exclude from analysis	1		2		9		13		16	
All responses trac	cking										
Respondent type	Representative of city government	19	95	33	91.7	61	88.41	74	85.06	99	87.61
	Other stakeholder organisation	0	5	1	2.8	5	7.25	9	10.34	10	8.85
	General public	1	0	2	55.6	3	4.35	4	4.60	4	3.54
Member State	Austria	0	0	0	0	0	0	0	0.00	0	0.00
coverage	Belgium	1	5	2	5.56	7	10.14	8	9.20	9	7.96
	Bulgaria	0	0	0	0	2	2.9	2	2.30	2	1.77
	Cyprus	0	0	0	0	0	0	0	0.00	0	0.00
	Czech Republic	0	0	0	0	0	0	0	0.00	0	0.00
	Denmark	1	5	1	2.78	2	2.9	2	2.30	2	1.77

	Week ending 27/04/12		ing Wook orlaing		Week ending 11/05/12		Week ending 18/05/12		Week ending 25/05/12	
	Count	%	Count	%	Count	%	Count	%	Count	%
Estonia	0	0	1	2.78	1	1.45	1	1.15	1	0.88
Finland	1	5	1	2.78	1	1.45	2	2.30	3	2.65
France	0	0	0	0	2	2.9	4	4.60	7	6.19
Germany	0	0	0	0	2	2.9	2	2.30	4	3.54
Greece	1	5	3	8.33	19	27.54	26	29.89	35	30.97
Hungary	1	5	2	5.56	2	2.9	3	3.45	3	2.65
Ireland	0	0	0	0	0	0	0	0.00	1	0.88
Italy	2	10	4	11.11	4	5.8	7	8.05	7	6.19
Latvia	0	0	0	0	0	0	0	0.00	0	0.00
Lithuania	1	5	1	2.78	2	2.9	2	2.30	2	1.77
Luxembourg	0	0	0	0	0	0	0	0.00	0	0.00
Malta	0	0	0	0	0	0	0	0.00	0	0.00
Netherlands	0	0	2	5.56	2	2.9	2	2.30	2	1.77
Poland	0	0	0	0	0	0	0	0.00	0	0.00
Portugal	1	5	1	2.78	1	1.45	1	1.15	1	0.88
Romania	0	0	0	0	1	1.45	1	1.15	2	1.77
Slovakia	0	0	1	2.78	1	1.45	1	1.15	2	1.77
Slovenia	0	0	0	0	0	0	0	0.00	0	0.00
Spain	1	5	2	5.56	2	2.9	4	4.60	5	4.42

		Week ending 27/04/12		Week 6		Week ending 11/05/12		Week ending 18/05/12		Week ending 25/05/12	
		Count	%	Count	%	Count	%	Count	%	Count	%
	Sweden	3	15	4	11.11	4	5.8	4	4.60	5	4.42
	United Kingdom	6	30	9	25.00	11	15.94	11	12.64	16	14.16
	Other	1	5	2	5.56	3	4.35	4	4.60	4	3.54
Bio-	Arctic	0	0	0	0.00	0	0	0	0.00	0	0.00
geographical coverage	Northern Europe (boreal region)	3	15	5	14.29	6	8.96	7	8.05	9	7.96
	North-western Europe	4	20	10	28.57	19	28.36	22	25.29	29	25.66
	Central and eastern Europe	3	15	5	14.29	10	14.93	11	12.64	14	12.39
	Mountain areas	0	0	0	0.00	1	1.49	2	2.30	3	2.65
	Coastal zones and regional seas	4	20	4	11.43	7	10.45	7	8.05	7	6.19
	Mediterranean	3	15	7	20.00	20	28.85	31	35.63	42	37.17
	Not sure	2	10	2	5.71	2	2.99	2	2.30	2	1.77
	Other	1	5	2	5.71	2	2.99	3	3.45	4	3.54
Whether the city	Yes	17	85	30	83.33	47	68.11	61	70.11	79	69.92
in question has begun work on	Planned	3	15	5	13.89	15	21.74	18	20.69	24	21.23
climate adaptation	No	0	0	1	2.78	7	10.15	8	9.20	10	8.85
Whether the city	Yes	5	25	11	36.67	15	31.91	21	24.14	29	25.66
has an adaptation strategy	No	12	60	19	63.33	32	68.09	40	45.98	50	44.25
Whether the	Yes	20	100	35	100	62	100	79	100	103	100

		Week ending 27/04/12 Count %		27/04/12 04/05/12		Week ending 11/05/12 Count %		Week ending 18/05/12 Count %		Week ending 25/05/12 Count %	
respondent is willing to take	No		0		0	0	0			0	0
part in this project (total)	No	0	U	0	0	0	0	0	0	0	0

A list of the EU cities that have responded is given in Appendix 2. Email addresses of those cities representatives that have responded were exported and passed to ICLEI.

Highlighted in orange show the gaps in responses where no responses have been given yet from some Member States.

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### 3.2 Headline survey statistics

The results of the survey are given below under the section headings of the survey structure see Appendix 4 for the survey statistics as of 25 May 2012.

#### 3.2.1 About the cities

Survey data on city characteristics reveal that of the cities surveyed the top city geographic characteristics include:

- 1. Land-locked
- 2. Coastal
- 3. Riverine

Coverage of 196 responses from the European biogeographical regions include:

Biogeographical regions	Coverage
Mediterranean	41%
North-western Europe	23%
Central and eastern Europe	14%
Northern Europe (boreal region)	10%
Coastal zones and regional seas	6%
Mountain areas	3%
Other	2%
Not sure	2%
Arctic	0%

#### 3.2.2 Weather and climate-related hazards and extreme events

Cities surveyed for the ASEC project are aware of evidence relating to extreme events that occurred in their city over the past 30 years. The top three reported past extreme events affecting European cities are:

- Periods of very hot weather or heat waves (81% of cities surveyed);
- Flooding from heavy rainfall (78% of cities surveyed) and;
- Storms (69% of cities surveyed).

Looking ahead at evidence relating to a potential increase in the frequency or severity of extreme events in the future, one of the top three expected future events is different with:

- 86% of cities expect an increase in periods of very hot weather or heat waves;
- 73% expecting flooding from heavy rainfall to increase over the next 30 years and.
- 71% expecting periods of reduced water availability, scarcity or drought.

#### 3.2.3 Adaptation support

Survey results on challenges - 24% of the 196 cities surveyed disagree that the right information is available to support adaptation planning in their city. They feel there is no support from:

- Formal adaptation networks (30%) or interdepartmental task forces (27%)
- Funding within sectoral budgets (28%) or dedicated adaptation funding (31%)
- Adaptation guidance or tool (24%)

Survey results on top barriers – lack of:

- Budget or resources
- Regional tools
- Political commitment, regional guidance or national tools

On learning from other European cities about preparing for climate change, the characteristics that would most influence their choice of city with which to engage, the counts of the respondents that replied "Very important" included:

•	Climate change impacts or vulnerability	133 out of 196
•	Geography	123 out of 196
•	Level of adaptation planning	97 out of 196
•	Population size	61 out of 196

For language as a characteristic, only 2 and 38 respondents stated it was "Very important" and "Important" respectively.

#### 3.2.4 City status on adaptation to climate change

Around a quarter (24%) of the cities surveyed so far report that an adaptation strategy that has been adopted in their city, with only 8% stating that no work is planned or has begun on climate adaptation.

Whather the city in avection	Yes	70 %	
Whether the city in question has begun work on climate adaptation	Planned	22 %	
	No	8 %	

70% of the 196 cities surveyed have begun work on adaptation, of which:

- 1% of cites believe that there climate adaptation programme is far advanced
- 6% are moving ahead of the field
- 16% are well on the way
- 47% are still in the very early stages of work on adaptation

Survey results on drivers for doing adaptation:

Vision of a sustainable city	81%
Objective to improve the quality of life for citizens	67%
National / Regional government requirement or recommendation	44%
Exposure to extreme weather	42%
Cost of business as usual versus action now	33%

#### 3.2.5 Assessing the risks of climate change

Overall, in comparison to the other timescales for risk assessments, only 2% of the cities surveyed have undertaken risk assessments for key issues/city sub-sector (such as buildings, water supplies, health etc.) over the next 50 years or longer of which focus on water supplies and sewage over the next 50 plus years. From the respondents surveyed, cities tend to be focusing more on risk assessments over the next 10 years and predominantly for sewage, city-owned buildings, energy supplies, and water supplies.

					over following ting tescales for each i		
Issues	0 to 10 years	11 to 30 years	31 to 50 years	50+ years	Risk assessment planned for the future	No risk assessment foreseen	Don't know
City-owned buildings	45	19	6	4	23	40	43
Other buildings	18	21	7	4	19	42	69
Infrastructure	33	23	10	6	30	28	50
Water supplies	40	16	12	8	30	25	49
Energy supplies	43	12	9	4	36	20	56
Human health	34	11	7	2	35	27	64
Vulnerable groups	34	13	5	3	35	27	63
Biodiversity	37	18	6	4	38	25	52
Food security	19	12	3	2	22	48	74
Sewage	52	15	13	7	21	20	52
Industry	19	15	9	1	22	34	80
Other	4	2	0	1	3	3	46
Total	378	177	87	46	314	339	698
Percentage	19%	9%	4%	2%	15%	17%	34%

#### 3.2.6 Details on adaptation strategies

The following list shows the top hazards addressed in the strategies of the cities surveyed who have begun work on climate adaptation (180 out of the 196 surveyed):

- Periods of very hot weather or heat waves (77 out of 180 cities surveyed)
- Flooding from heavy rainfall (61 out of 180)
- Periods of reduced water availability, scarcity or drought (55 out of 180)
- Flooding from rivers (50 out of 180)
- Storms (43 out of 180)

Cities plans for further development of their adaptation strategies include:

- Further specific sectoral research (32% of the 180)
- Further specific cross-cutting research (26% of the 180)

#### 3.2.7 Engagement

The most common form of method for engagement with different groups for cities whilst developing their strategies is workshops (22% across all the 12 groups). Formal partnerships were the most common method for engaging with elected city politicians and also had the highest response across the respondents.

Extent of engagement with different groups for developing city adaptation strategies (counts from 103 cities who went on to answer this question)	Formal partnership	Written consultation	Interviews	Workshops	No engagement yet, but foreseen	No engagement foreseen	Do not know
Elected city politicians	46	8	3	13	16	1	8
National Government	22	10	3	10	15	16	14
Regional Government	31	9	1	17	16	10	11
Spatial planners from within your city	20	6	6	27	17	3	9
Interdepartmental city group or task force	19	12	1	22	13	7	13
Health providers	13	13	7	14	16	11	15
Emergency services (e.g. fire, police)	19	9	7	17	15	9	13
Local NGOs, religious groups etc.	13	11	5	27	13	8	11
City citizens	10	12	4	28	24	5	9
Local communities	10	11	4	29	22	5	9
Vulnerable population groups	7	7	6	17	22	11	18
Other	4	2	0	2	1	1	16
Total	214	110	47	223	190	87	146
Percentage	21%	11%	5%	22%	19%	9%	14%

#### 3.2.8 Commitment or resources

On resources, 20% of the 196 cities surveyed do not have resources allocated yet to implement their strategy, 1% have resources fully allocated also beyond current budgeting period.

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#### 3.2.9 Interested in participation

100% of respondents are interested in actively participating in the project, of which 54% are keen to participate in workshops and stakeholder dialogues.

Activities identified to increase capacity include:

- Sharing information and experience via web portal (67%)
- Bilateral exchange with another city (48%)

#### 3.2.10 Training needs

The top training need is help with developing adaptation options (63%). The other types of knowledge or capacities needed development and training include:

- Implementing adaptation measures (58%)
- Involving the community (56%)
- Assessing impacts (55%)
- Prioritising risks (52%)
- Creating organisational support (44%)
- Knowledge on climate impacts (49%)
- Communicating climate change (37%)
- Understanding of climate change (31%)

## 4 Conclusions on survey findings

By 17 July 2012, 196 responses to the survey had been received from cities across Europe, the majority of which were from the Mediterranean (41%) and North-western Europe (23%). Analysis of the responses revealed the following headline results.

- 81% out of the cities surveyed have experienced periods of hot weather and heat
  waves and expect this to the main impact over the next 30 years that they will have to
  deal with as part of their adaptation strategies. Looking ahead, 71% of cities
  surveyed expect increase in periods of reduced water availability over the next 30
  years as well.
- Around a third of the cities do not believe that there is sufficient support in the form of networks and task forces, funding or specific adaptation guidance or tools for adaptation planning in their cities. Lack of budget and resources (20% of the 196 cities surveyed do not have resources allocated yet to implement their strategy, 1% have resources fully allocated also beyond current budgeting period), guidance and tools at all levels and political commitment are considered the main barriers.
- 14% of cities have an adaptation strategy which is mandatory due to a legal obligation; others (34%) have a required policy document due to the city making a public commitment to voluntarily produce an adaptation strategy.
- The characteristics that would most influence the choice of peer city with which to engage on adaptation are climate impacts, vulnerability and geography; language was not identified as a major inhibitor to engagement.
- Only 8% of the cities surveyed had not started thinking or working on adaptation. Around a quarter (24%) of the cities surveyed so far report that an adaptation strategy has been adopted in their city. Of those that have begun, the most are still in the very early stages (47%).

As yet, in comparison to the other timescales for risk assessments, only 2% of the cities surveyed have undertaken risk assessments for key issues/city sub-sector (such as buildings, water supplies, health etc.) over the next 50 years or longer of which focus on water supplies and sewage over the next 50 plus years. From the respondents surveyed, cities tend to be focusing more on risk assessments over the next 10 years and predominantly for sewage, city-owned buildings, energy supplies, and water supplies.

On the engagement with different groups on the plans for their adaptation strategies the most common form of method for engagement is via workshops. Activities identified to increase capacity include: sharing information and experience via web portal (67%), bilateral exchange with another city (48%). Respondents identified the two top training needs as help with developing adaptation options (63%) and help with implementing adaptation measures (58%).

Appetite for participating in the project was very high. 54% were keen to participate in workshops and stakeholder dialogues.

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## **Appendices**

Appendix 1: Survey questions

Appendix 2: List of cities responded

Appendix 3: Survey statistics as of 17 July 2012

## **Appendix 1 – Survey questions**

## Preparing for climate change in cities – a survey across Europe

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
Introduction	Dear City Authority  Welcome to this survey of cities in the EU preparing for climate change. This survey is part of the European Commission project Adaptation Strategies for European Cities.	Introductory text only.	Provides context of project and aims to engage participants.	N/A
	Developing adaptation strategies not only makes cities more resilient to the threats of climate change but also provides opportunity for cities to justify investment in upgrading local infrastructures and improving the quality of the lives of their citizens. Cities leading the adaptation agenda may also attract innovative industries and jobs.			
	Recognising how important this is, this project, commissioned by DG Climate Action, aims to:			
	Provide capacity building and assistance for cities in developing and implementing an adaptation strategy.			
	The project will:			
	<ul> <li>Expand the knowledge base of the likely impacts of climate change facing cities and their capacity to adapt to them</li> <li>Engage cities across Europe, raising awareness throughout Europe on the importance of preparing for climate change in cities,</li> <li>Facilitate capacity building for selected cities, exchanging knowledge and good practices between cities, and</li> <li>Share the lessons learned, including the tools developed during the project and guidance for</li> </ul>			

Appendix 2: Survey

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)			
	cities on adaptation.						
	As part of the project the partners are undertaking a survey of cities across Europe. This survey is designed to collect some initial information from European cities to obtain an overview of the state of play in preparing for adaptation.						
	By completing this survey you can register your interest to receive updates and future information, and to be considered for future involvement, as one of the peers, trainees and adaptation pilots engaged by the project.						
	The survey should take around 20 minutes to complete, you can use the back button but the survey needs to be filled in on-line in one single session.	To appear					
	We are looking for one response per city, so please check and confer with your city colleagues before completing the response for your city.	on in a box as a reference on the first					
	Some helpful definitions	page.					
	Climate change - refers to any change in climate over time, whether due to natural variability or as a result of human activity. This definition differs from that in the United Nations Framework Convention on Climate Change (UNFCCC), which defines climate change as: 'a change of climate which is attributed directly or indirectly to human activity that alters the composition of the global atmosphere and which is in addition to natural climate variability observed over comparable time periods'.						
	<b>Adaptation</b> - refers to adjustments in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities. There are various types of adaptation, including anticipatory, autonomous and planned (EEA 2008, Impacts of Europe's changing climate — 2008 indicator-based assessment).	es. There are various types of adaptation, including anticipatory, autonomous ed (EEA 2008, Impacts of Europe's changing climate — 2008 indicator-based					
	Vulnerability-is the degree to which a system is susceptible to, and unable to cope with, adverse effects of climate change, including climate variability and extremes. Vulnerability						

Appendix 2: Survey

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
Al-	is a function of the character, magnitude, and rate of climate change and a variation to which a system is exposed, its sensitivity and adaptive capacity (EEA 2008, Impacts of Europe's changing climate — 2008 indicator-based assessment).	Frankland	Accide	Davis
About your city	1. Please tell us about your city¹.  Name of city*: Country*: Administrative unit (LAUcode): LAU Local Administrative units were set up by Eurostat to meet the demand for statistics at local level. More information is available on the Eurostat website here. Your email address*: Your name²: Your job title:  1 Your details will be held on a European Commission database from this point forward and used by the project team for the duration of this project only.  2 By leaving your name you agree to be contacted later about the project.	Free text responses  * Compulsory question Form layout, limit to 50 words per line.  Country question will have a drop down box for the EU 27 and an "other" category for those respondents not in the EU27. "Other" to be limited to a short open response.	Avoids bogus or unwanted answers as survey will be publicly available and help us to identify city administratio ns from the outset.  Country question will allow us to see MS covered of respondents, and target poor coverage if needed.	Review responses to ensure there is no duplication, incomplete or bogus responses.  Also confirm which MS were not covered.

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	<ul> <li>Are you responding as:</li> <li>Representative of a city government</li> <li>Representative of another stakeholder organisation</li> <li>General public</li> </ul>	Multiple choice, one choice only	Avoids bogus or unwanted answers as survey will be publicly available and help us to identify city administrations from the outset.	Review responses, filter out general public responses
	3. Are you involved in any of the following city networks:  Please select all that apply.  Covenant of Mayors  Eurocities  ICLEI Resilient Cities Network  Other (please specify)	Multiple choice, no limits. 'Other' as free text, max 50 words.	Meets the requirements of the ITT (p3): "This should give an overview of whether there are cross-border initiatives between cities and cooperation between cities and surrounding areas".	1) Record the number of respondents that selected each of the five named city networks. 2) Create a list of the additional networks that respondents specified under the "other" category. 3) Potentially cross-check points 1 and 2 above. For example, if a city is not

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Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
				involved in any of the listed 5 networks, is it because they are involved in lots of other networks?
	In which main European Environment Agency bio-geographical region would you classify your city?  Please select only one that best represents your city.	Multiple choice, one answer only	Useful for classifying cities using the typology in Task 1.1	1) Record the number of respondents that entered each of the 7
	For more information on the bio-geographical regions relevant for cities please see the EEA's map of the regions <u>here</u> .			listed zones. 2) Create a list of the responses in the
	<ul> <li>Arctic</li> <li>Northern Europe (boreal region)</li> <li>North-western Europe</li> <li>Central and eastern Europe</li> <li>Mountain areas</li> <li>Coastal zones and regional seas</li> </ul>			"other" category.  3) Potentially double-check "not sure" responses and complete if
	<ul> <li>Mediterranean</li> <li>Not sure</li> <li>Other (please specify)</li> </ul>			possible.
	5. Which geographic features best characterise your city's location?	Multiple choice, no	Will help to assess the	1) Record the number of
	Please select <u>all</u> that apply.  • Coastal	limits. 'Other' in	context within which adaptation	respondents that selected each of the 6

Appendix 2: Survey

Section	Questions/text				Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	<ul> <li>Island</li> <li>Land-locked</li> <li>Mountainous</li> <li>Riverine</li> <li>River delta</li> <li>Other (please specify)</li> </ul>				free text, max 50 words.	actions are taken.	listed features. 2) Record number of respondents that answered particular combinations of features (e.g. land-locked and riverine) 3) Create a list of the additional features that respondents specified under the "other" category.
Weather and climate- related hazards and extreme events in your city	6. Looking back, are you awa events that occurred in you Please select all that apply, stating  Events	<u>ır city</u> over	the past 30	) years?	Multiple choice, one choice per row.		1) Record the number of responses in each cell. 2) Evaluate the trends both across columns and rows – which events
	Periods of very hot weather or heat waves  Periods of extreme cold and/or heavy snowfall and ice						are perceived to be increasing in frequency? Are there many "don't know"

Section	Questions/text							Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	Periods of reduced water availability, scarcity or drought Flooding from rivers Flooding from heavy rainfall Flooding from rapid snow or ice melt Flooding from sea water Storms Coastal storm surges Rock falls and landslides Subsidence Fires in semi-natural/natural areas Other (please specify)							'Other' in free text, max 50 words.		responses? 3) Potentially cross-check with responses to Q12 – Do "don't know" responses correspond with a lack of information on climate projections?
	7. Looking ahead, are you aware of evidence relating to a potential increase or decrease in frequency or severity of weather and climate-related hazards and/or extreme events in your city over the next 30 years?  Please select all that apply, stating if you think each will increase, decrease or show no change in the future.									<ol> <li>Record the number of responses in each cell.</li> <li>Evaluate the trends both</li> </ol>
	Events	Will increase	No change	Will decreas e	Not relevant	Don't know		increase" or "will decrease" on		across columns and rows – which events

Section	Questions/text							Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	Periods of very hot heatwaves Periods of extreme heavy snowfall and Flooding from rivers Flooding from rapid ice melt Flooding from sea veriods of reduced availability, scarcity Storms Coastal storm surger Rock falls and lands Subsidence Fires in semi-natura areas Other (please speci	cold and/o ice s y rainfall snow or vater water or drough	r					the same row.		
Adaptation support		apply and	also the leve	el at which th	e support o	· perates. Pl	•	Multiple choice, no limits.  Free text on 'other' and 'details' (if selected).	Meets the requirements of the ITT (p4): "The contractor should also take stock of databases, tools and policies in	1) Record the number of responses in each cell.  2) Evaluate the trends both across columns and rows – which kinds of support are

Appendix 2: Survey

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	action plan Adaptation guidance or tool Other development strategies (urban, sustainability etc.) Data on vulnerability Data on climate change impacts Projections of future climate change Formal adaptation networks Interdepartmental task force Funding for climate change adaptation within sectoral budgets Dedicated funding for climate change adaptation activities Other (please specify) Please provide further details or web link(s)		member states." Helps to provide valuable citylevel information on both adaptive capacity and state of play, as per the requirements of the ITT.	most readily available? What level of support is most commonly available?

Section	Questions/text						Reason	Evaluation (how the question will be evaluated and used)
	planning in y Please select one Strongly a Agree	rour city? eresponse. gree ree or disagree	he right informa	tion is available to si	Multiple choice, one choice only.		1) Record the number of responses against each category to evaluate how respondents feel about the availability of information. 2) Potentially cross-check with the responses in Q5 and Q6.	
	characteristics	10. If you could learn from other European cities about preparing for climate change, which characteristics would most influence your choice of city with which to engage? Please select <u>all</u> that are important.					Aids grouping of the cities to facilitate the training.	1) Record the number of responses in each cell.
	Characteristic	Very important	Important	Not important	Don't know	row	training.	2) Evaluate the
	Population size							trends in each
	Population trend							group.
	Geography							
	Language					]		
	Economy							
	Climate change impacts or vulnerabilities							

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	Level of adaptation planning Other	'Other' in free text box.		
Your city's status on adaptation to climate change	11. Please select the one option that in your opinion best describes your city's current status on adaptation to climate change*  Clarification:  This self-assessment question is correlated with PACT. PACT is an evidence-based framework for assessing and improving your organisation's response to the challenges posed by climate change. It has been widely tested in many types of organisation in different countries and is backed by a growing evidence base and robust statistical analysis.  By 'adaptation' in this context we mean dealing both with current climate impacts and those that may be expected as a consequence of future climate change. At present, many cities have yet to begin to prepare for the impacts of climate change. However, a few are moving further ahead.  a) Not yet begun work on climate adaptation If your city has not yet begun work on climate adaptation, are you planning to do so in the near future?  • Yes • No  b) Very early stages c) Well on the way d) Moving ahead of the field e) Our climate adaptation programme is far advanced  Comments box (please provide details on the option you selected)	* Compulsory question  Respondent chooses one from options offered.  If select a) in question 12, continue to sub- question.  If select 'no' to sub- question, then jump to questions 12 and 15 and then the end of survey.  If select 'yes' move to section Q12.	Provides valuable city- level information on both adaptive capacity and state of play, as per the requirements of the ITT.  This is a standard question, slightly revised. The five answers broadly relate to PACT RLs 1 to 5, the text in this option has been used in non- native English speaking	Record the number of responses under each of the five descriptions.  Collate a list of the comments against each response a)-e).

Section	Questions/text					Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
							countries and needs to remain short with less description so that we can assign more meaning to the answer which is then verified later on in the survey with Q16-21.	
	<b>12.</b> Are you aware of any major regeneration plans in your city?  Please select <u>all</u> that apply and indicate whether the plans are already in place or foreseen in the near future					limits, but must select	To assess the urgency of taking adaptation into account	1) Record the number of responses in each cell.
		Plans in place	Foreseen for the next 5 years	No plans / not foreseen	Don't know	option between	potion now and the chance to influence major regeneration in the city with an	2) Evaluate the trends both across columns and rows.
	Major urban regeneration plans Major water infrastructure					develop in next 5 years		
	investment  Major sewerage infrastructure investment					or don't adaptation know. strategy.		

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	Major industrial investment  Other (please specify)			
	<ul> <li>13. Does your city have an adaptation strategy*?</li> <li>Yes</li> <li>No</li> </ul>	*Compulsory question		1) Record the number of respondents that selected yes and no and group the detailed responses to the rest of the questions in the section.
	<ul> <li>14. What are/were the main reasons for developing your city's adaptation st Please select all that apply.</li> <li>National/Regional government requirement or recommendation</li> <li>Exposure to extreme weather</li> <li>Cost of business as usual versus action now</li> <li>Vision of a sustainable city</li> <li>Objective to improve the quality of life for citizens</li> <li>Other (please specify)</li> </ul>	Multiple choice, no limits. 'Other' as free text limited to 10 words	To understand the main drivers for developing their strategy.	1) Record the number of respondents that selected each of the reasons provided. 2) Create a list of the responses in the "other" category. 3) Potentially cross-reference responses to "exposure to extreme

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
				weather" with the responses to Q5.
	The following questions aim to get a better understanding of the current status of adaptation in European cities.	Multiple choice, no	To understand	1) Record the number of
	15. If your city has not yet developed an adaptation strategy, please outline the main reasons for this.	limits.	the drivers behind why cities have	responses in each category. 2) Create a list
	Please select <u>all</u> that apply.	If answer question 16 then asked the	not developed strategies.	of the responses in the "other" category.
	Lack of political commitment	regeneration		
	Lack of national guidance	question and go to end of		
	Lack of regional guidance	the survey.		
	Lack of urban guidance			
	Lack of national tools			
	<ul> <li>Lack of regional tools</li> <li>Lack of urban tools</li> </ul>			
	Lack of national climate data/projections			
	Lack of regional climate data/projections			
	Lack of urban climate data/projections			
	Lack of local climate data/projections			
	Lack of budget or resources	'Other' as		
	Lack of agreement on the responsibility at city department level	free text		
	Lack of skills and expertise in the area	limited to 10		
	Lack of legal obligation	words		

Section	Questions/text					Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	<ul><li>Other policy priorities</li><li>Uncertainty on where to start</li><li>Other (please specify)</li></ul>							
Further details on your city's status on adaptation to climate change	Title of the strategy: Date published: Web link: Lead organisation and organisational strategy Geographical area covered by the strategy	Form layout, limit to 50 words per line.	To aid the state of play review in Task 1.	Record the response and information provided. Record the number of respondents that have a complete strategy.				
	Mandatory due to a legal obligation  A required policy document due to the city making a public commitment to voluntarily produce an adaptation strategy  To be regularly revised  Supported by a dedicated	No No	Yes	Don't know	): 	Multiple choice, no limits.	To identify those cities that have a mandatory obligation or not, and how the strategy sits in the wider policy context.	Record the number of responses in each category.

Section	Questio	ns/text								Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	If yes, p	financial bud Integrated in such as an u development sustainability Supported by programme of	a wider s irban t or a r strategy y an adap or action p	otation						Further details box has free text limited to 50 words per option.		
Assessing the risks of climate change	18. To fol ch	what extent lowing times ange*? a list of issu	has your cales that ues that a horizons the futu	r city ass at might a are often s over ware.	essed tharise from covered hich you	ne risks (arm changing din such a la have ma	nd any oppo ng weather p assessment de assessm	to adapt to cli rtunities) over atterns and/or s. For each of ents or indica	the climate these, ate if you are	* Compulsory question, minimum one tick per row but may be more than one. Qualifies the earlier questions on	Meets the requirements of the ITT (p3): "The capacities to respond to adaptation needs" and "[Assess] the	1) Record the number of responses in each category. 2) Evaluate the positive responses to the first four time horizons – how many respondents
	City-o buildir Other		10 years	30 years	50 years	years	assessme t planned for the future	en assessme nt foreseen	Don't know	the adaptation strategy section.	awareness about adaptation to climate change". This is the necessary	have assessed the risks over all four time horizons?

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	Infrastructure Water supplies Energy supplies Human health Vulnerable groups Biodiversity Food security Sewage Industry Other  If other, please specify.	Open text box for other	platform for adaptive actions. Indications of higher capacity come from longer periods of assessment.	
	19. What resources and sources of evidence did/do you plan to use in future for these assessments of risk?  Please tick all that apply.  Specially commissioned scientists (e.g. from a university)  Probabilistic impact projections (e.g. from climate scenarios)  Other impact projections (e.g. from IPCC or from National Government)  Specialist consultancies  Specialist in-house experts  General consultancies  Other in-house staff  Stakeholder consultation (e.g. with local businesses)  Media sources	This question is asked of all respondents who tick any box except for 'no plans' in any row in Q18 directly above Free text in 'other' category	Meets the requirements of the ITT (p3): "The capacities to respond to adaptation needs" and "[Assess] the awareness about adaptation to climate change".	1) Record the number of responses in each category. 2) Create a list of the responses in the "other" category.

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	<ul> <li>Specialist risk assessment tools/methods</li> <li>Other sources (please specify)</li> </ul>		Tests the response to the previous question.	
Details on your city's adaptation strategy	20. Which of the following hazards does your adaptation strategy address?  Please select all that apply.  Periods of very hot weather or heat waves  Periods of extreme cold and/or heavy snowfall and ice  Periods of reduced water availability, scarcity or drought  Flooding from rivers  Flooding from heavy rainfall  Flooding from rapid snow or ice melt  Flooding from sea water  Storms  Coastal storm surges  Rock falls and landslides  Subsidence  Fires in semi-natural/natural areas  Not sure  Other (please specify)	Multiple choice, no limits.  Free text, max 50 words	Meets the requirements of the ITT (p3): "The state of play of cities in preparing for adaptation to climate change. This should give an overview of which EU cities are developing or have an adaptation strategy, the stage of implementati on, the approach of the strategy".	responses in each category. 2) Create a list of the responses in the "other" category.

Section	Questions/t	ext								Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	Please select Furi Furi Graph Graph Graph Graph Furi Graph Graph Graph Furi Graph Graph Graph Furi Furi Furi Furi Furi Furi Furi Furi	t all that appl ther specific s ther specific c eak-through" ution is currer er (please sp projects are som re. They need to ample to design,	sectoral resear cross-cutting re projects (proje tly evident)	rch esearch ects that ain lways) needed ourrent custom a	n to find wa to address long and practice, Ico projects are no	ger term climate soking to make so t desk exercises	j adaptatio impacts – tyl ubstantial an but involve c	on for who pically at lead innovative close co-ope	ast 10	Multiple choice, no limits.	This section is only for some cities who have/develo ping strategies and will be used to aid selection of the peer cities.	1) Record the number of responses in each category. 2) Create a list of the responses in the "other" category.
Engagement	Please tick a  Elected city politicians National	age) with the	this strategy, e groups belo the relevant Written consultation	w?	Workshop s	No engagement yet, but foreseen	No engage ment foreseen	Do not know	olans	Multiple choice, no limits.	Assesses capacity of the city. Wider engagement shows higher level of progress and greater level of buy-in to the strategy.	1) Record the number of responses in each cell.  2) Evaluate the trends both across columns and rows.
	Government Regional Government Spatial planners from within your city Interdepartm ental city group or task									This question would not be asked if respondents have not yet begun work	Will aid identification of the type of training needed.	

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Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
Commitment of resources	Groce   Health	on climate adaptation (a) Q11.  Multiple choice, one choice only.  This question would not be asked if they have not yet begun work on climate adaptation (a) Q11.	Assesses capacity of the city.	Record the number of responses in each category.

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
Your city's interest in participating in the project	<ul> <li>24. Are you interested in actively participating in the project? If yes, please indicate the kind of activities you are interested in,</li> <li>Please select all that apply.</li> <li>Sharing information and experience via web portal</li> <li>Support the development of tools and guidance</li> <li>Participate in workshops and stakeholder dialogues</li> <li>Participate in the capacity building programme as a city that is advanced in the adaptation process  <ul> <li>Please describe the capacities and resources that equip you for this role below.</li> </ul> </li> <li>Participate in the capacity building programme as a city that is in the beginning of the adaptation process</li> <li>Bilateral exchange with another city</li> <li>No interest</li> <li>Other (please specify)</li> </ul>	Multiple choice, no limits  Free text on other option limited to 50 words.	Identification of type of training required across European cities.	1) Record the number of responses in each category. 2) Create a list of the responses in the "other" category.
Training needs	In order to develop and deliver suitable training throughout this project, we would like to learn more about your need for additional training.  25. What types of knowledge or capacities need to be developed in your organisation?  Please select all that apply.  • Understanding of climate change • Communicating climate change • Knowledge on climate impacts	Only for those whose cities have a strategy in place and who have answered the questions on capacity. Free text on	To record those that are willing to engage with this project.	1) Record the number of responses in each category. 2) Create a list of the responses in the "other" category.

Appendix 2: Survey

Section	Questions/text	Style of question (multiple choice, rank, compulsory etc.)	Reason	Evaluation (how the question will be evaluated and used)
	<ul> <li>Assessing impacts Prioritising risks</li> <li>Developing adaptation options</li> <li>Implementing adaptation measures</li> <li>Creating organisational support</li> <li>Involving the community</li> <li>Don't know Other (please specify)</li> </ul>	peer city option limited to 100 words.		
End of survey	Are there any issues or comments with regards to EU-Policy supporting cities' adaptation to climate change that have not been covered sufficiently by the questions above? If yes, please use the space below to communicate them to DG Climate Action.	Open text	Responses collated.	All responses passed to DG CLIMA for their information.
	Thank you for taking the time to complete this survey on cites and climate change.  Please let us know if you would like to continue receiving information about this project.  • Yes • No	Multiple choice (no tick boxes available).	Create a mailing list for project and cities network, engaging wider with other cities outside the candidate cities.	Record responses.

# **Appendix 2 – List of EU cities responded**

Name of city	Country	Number of response per city
Seraing	Belgium	2
Antwerp	Belgium	1
VIROINVAL	Belgium	1
Hasselt	Belgium	1
Wuustwezel	Belgium	1
Kampenhout	Belgium	1
Oostende	Belgium	1
Ghent	Belgium	1
Brussels (Brussels-Capital Region)	Belgium	1
Stad Brugge	Belgium	1
Plovdiv	Bulgaria	1
Burgas	Bulgaria	3
Sofia	Bulgaria	3
City of Koprivnica	Croatia	2
City of Zadar	Croatia	1
Aalborg	Denmark	3
Albertslund	Denmark	1
Copenhagen	Denmark	2
Rakvere	Estonia	2
Lahti	Finland	3
Turku	Finland	1
Tampere Urban Region	Finland	1
Lappeenranta	Finland	1
PERRIGNY	France	1
Clermont-Ferrand	France	1
Angers	France	1
Saint-Claude	France	1
METROPOLE NICE COTE D'AZUR	France	1
Paris	France	1

Name of city	Country	Number of response per city
LYON	France	1
Rennes Metropole	France	1
Nevers	France	2
Bremerhaven	Germany	1
City of Cologne	Germany	1
Muenchen	Germany	1
Hamburg	Germany	1
Bremerhaven	Germany	1
Gibraltar	Gibraltar	1
MUNIICIPALITY OF KALAMARIA	Greece	1
TANAGRA	Greece	1
TINOS	Greece	1
Municipality of Festos	Greece	1
DHMOS KALLITHEAS	Greece	1
ACHARNES	Greece	1
MUNICIPALITY OF KENTRIKA TZOUMERKA	Greece	1
Aridea	Greece	1
AIGALEO	Greece	1
Municipality of Xanthi	Greece	1
AGIA PARASKEVI	Greece	1
Municipality Anogia	Greece	1
KIFISSIA	Greece	1
Region of Ermionida	Greece	1
STYLIDA	Greece	1
MARKOPOULO MESSOGHEAS	Greece	1
Municipality of Penteli	Greece	1
Municipality of Voria Tzoumerka	Greece	1
LARISSA	Greece	1
Messolonghi	Greece	1
Chryssoupoli	Greece	1
Korydallos	Greece	1

Name of city	Country	Number of response per city
Municipality of Trikala	Greece	1
Peristeri	Greece	1
ATHENS	Greece	1
MUNICIPALITY OF AMAROUSSION	Greece	1
PYLI - MUNICIPALITY OF PYLI	Greece	1
Kessariani	Greece	1
City of Ptolemaida	Greece	1
ELEFSINA	Greece	1
ARTA	Greece	1
Dafni - Ymittos, Attica	Greece	1
Rhodes	Greece	1
Municipality of Rigas Feraios	Greece	1
NAXOS	Greece	1
Municipallity of Haidari	Greece	1
Amynteo	Greece	1
Municipality of Monemvasia	Greece	1
Platanias	Greece	1
Municipality of Elliniko-Argyroupoli	Greece	1
IOANNINA	Greece	1
Nea Ionia Attikis	Greece	1
Municipality of Karpenissi	Greece	1
PAGGAIOU KAVALAS	Greece	1
Paxos (Paxi Islands)	Greece	1
DELTA MUNICIPALITY	Greece	1
Municipality of Paionia	Greece	1
GREVENA	Greece	1
Nigrita	Greece	1
Thermo	Greece	1
Dimos Gortynas	Greece	1
PATRAS	Greece	1
Budapest	Hungary	2
Tatabánya	Hungary	1

Name of city	Country	Number of response per city
Dublin	Ireland	1
Cesano Maderno	Italy	1
Bologna	Italy	3
Padova	Italy	2
Ancona	Italy	2
Rimini	Italy	1
Modena	Italy	1
Rome	Italy	1
Latina	Italy	1
Bologna	Italy	1
Milan	Italy	3
Napoli	Italy	1
SIENA PROVINCE	Italy	1
Ascoli Piceno	Italy	1
Cesena	Italy	1
Alba	Italy	1
Città di Venezia	Italy	1
BARI	Italy	1
ZeroCO2 Communities: Bagnone, Fivizzano, Comano (Province of Massa Carrara)	Italy	1
Vilnius	Lithuania	1
Biržai	Lithuania	1
Capital city Podgorica	Montenegro	1
Emmen	Netherlands	1
Wijdemeren	Netherlands	1
Amsterdam	Netherlands	1
Rotterdam	Netherlands	1
Arnhem	Netherlands	1
Krapkowice	Poland	1
Warsaw	Poland	1
Almada	Portugal	1
Esposende	Portugal	1

Name of city	Country	Number of response per city
Ploiesti	Romania	1
Second District of Bucharest	Romania	1
IASI	Romania	1
Oradea	Romania	1
TIMISOARA MUNICIPALITY	Romania	1
HUSI MUNICIPALITY	Romania	1
Braila	Romania	1
Sfîntu Gheorghe	Romania	1
Čadca	Slovakia	1
Bratislava	Slovakia	1
Spišská Nová Ves	Slovakia	1
GIRONA	Spain	1
Vitoria-Gateiz	Spain	2
Calvià	Spain	1
Barcelona	Spain	1
MURCIA	Spain	1
AZUQUECA DE HENARES	Spain	1
REDONDELA	Spain	1
velika plana	srbija/Serbia	1
Malmö	Sweden	1
Tranemo	Sweden	1
Municipality of Boxholm	Sweden	1
Municipalty of Mjölby	Sweden	1
Västerås stad	Sweden	1
Arvidsjaur	Sweden	1
Växjö	Sweden	1
Oskarshamn	Sweden	1
Laholm	Sweden	1
Karlskrona	Sweden	1
Peterborough	United Kingdom	1
Reading	United Kingdom	1
Aberdeen	United Kingdom	1

Name of city	Country	Number of response per city
Southampton	United Kingdom	1
Plymouth	United Kingdom	1
Glasgow City Region	United Kingdom	1
Edinburgh	United Kingdom	1
Manchester	United Kingdom	1
Portsmouth	United Kingdom	1
Bristol	United Kingdom	1
Glasgow City Council	United Kingdom	1
Brighton & Hove	United Kingdom	1
York	United Kingdom	1
Stirling	United Kingdom	1
Nottingham	United Kingdom	1
Perth	United Kingdom	1
Forest of Dean District	United Kingdom	1
Oxford	United Kingdom	1
Sheffield	United Kingdom	1
Liverpool	United Kingdom	1
Kingston upon Hull	United Kingdom	1
Norwich	United Kingdom	1
Plymouth	United Kingdom	1

# Appendix 3 – Survey statistics as of 17 July 2012

Response statistics for Preparing for climate change in cities - a survey across Europe

Status: Active

Start date: 2012-04-20 End date: 2013-04-01

There are 196 responses matching your criteria of a total of 196 records in the current set of data.

### Search criteria

All data requested

#### **Meta Informations**

## **About your city**

Country:			
	Number of requested records	% Requested records(196)	% of total number records(196)
Austria	0	0.00%	0.00%
Belgium	11	5.61%	5.61%
Bulgaria	7	3.57%	3.57%
Cyprus	0	0.00%	0.00%
Czech Republic	0	0.00%	0.00%
Denmark	6	3.06%	3.06%
Estonia	2	1.02%	1.02%
Finland	6	3.06%	3.06%
France	10	5.10%	5.10%
Germany	5	2.55%	2.55%
Greece	52	26.53%	26.53%
Hungary	3	1.53%	1.53%
Ireland	1	0.51%	0.51%
Italy	24	12.24%	12.24%
Latvia	0	0.00%	0.00%
Lithuania	2	1.02%	1.02%
Luxembourg	0	0.00%	0.00%
Malta	0	0.00%	0.00%
Netherlands	5	2.55%	2.55%
Poland	2	1.02%	1.02%
Portugal	2	1.02%	1.02%
Romania	8	4.08%	4.08%
Slovakia	3	1.53%	1.53%
Slovenia	0	0.00%	0.00%
Spain	8	4.08%	4.08%
Sweden	10	5.10%	5.10%
United Kingdom	23	11.73%	11.73%
Other	6	3.06%	3.06%

Are you responding as:

Representative of a city government	Number of requested records	% Requested records(196)	% of total number records(196) 79.08%	
Representative of another stakeholder organisation	23	11.73%	11.73%	
General public	20	10.20%	10.20%	

Are you involved in any of the follow	ving city networks?	Please select all th	nat apply.
	Number of requested records	% Requested records(196)	% of total number records(196)
Covenant of Mayors	95	48.47%	48.À7% <sup>′</sup>
Eurocities	38	19.39%	19.39%
ICLEI Resilient Cities Network	34	17.35%	17.35%
Other	53	27.04%	27.04%

In which main European Environment Agency (EEA) bio-geographical region would you classify your

city? Please select only one that best presents your city. For more information on the bio-geographical regions relevant for cities please see the EEA's map of the regions here. Number of % Requested % of % of records(196) total number total number requested records(196) records(192) records Arctic 0.00% 0.00% 0.00% 0 Northern Europe (boreal region) 19 9.69% 9.69% 9.90% North-western Europe 44 22.45% 22.45% 22.92% Central and eastern Europe 27 13.78% 13.78% 14.06% 5 2.55% 2.55% 2.60% Mountain areas Coastal zones and regional seas 11 5.61% 5.61% 5.73% 79 Mediterranean 40.31% 40.31% 41.15% Not sure 3 1.53% 1.53% 1.56%

Which geographic features best characterise your city's location? Please select all that apply.				
Coastal	Number of requested records 64	% Requested records(196)	% of total number records(196) 32.65%	
Island	14	7.14%	7.14%	
Land-locked	78	39.80%	39.80%	
Mountainous	29	14.80%	14.80%	
Riverine	49	25.00%	25.00%	
River delta	13	6.63%	6.63%	
Other	22	11.22%	11.22%	

2.04%

4

Other

N/A

Weather and climate-related hazards and extreme events in your city

Looking back, are you aware of evidence relating to weather and climate-related hazards and/or extreme events that occurred in your city over the past 30 years? Please select all that apply, stating whether they

2.04%

2.04%

2.08%

# did or did not occur in the past, or you don't know.

Periods of very hot weather or heat waves				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(187)
Yes	151	77.04%	77.04%	80.75%
No	32	16.33%	16.33%	17.11%
Don't know	4	2.04%	2.04%	2.14%
N/A	-	-	4.59%	-

Periods of extreme cold and/or heavy snowfall and ice					
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(184)	
Yes	122	62.24%	62.24%	66.30%	
No	55	28.06%	28.06%	29.89%	
Don't know	7	3.57%	3.57%	3.80%	
N/A	-	-	6.12%	-	

Periods of reduced water availability, scarcity or drought					
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(183)	
Yes	109	55.61%	55.61%	59.56%	
No	65	33.16%	33.16%	35.52%	
Don't know	9	4.59%	4.59%	4.92%	
N/A	-	-	6.63%	-	

Flooding from rivers				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(176)
Yes	93	47.45%	47.45%	52.84%
No	79	40.31%	40.31%	44.89%
Don't know	4	2.04%	2.04%	2.27%
N/A	-	-	10.20%	-

Flooding from heavy rainfall				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(180)
Yes	140	71.43%	71.43%	77.78%
No	37	18.88%	18.88%	20.56%
Don't know	3	1.53%	1.53%	1.67%
N/A	-	-	8.16%	-

Flooding from rapid snow or ice melt				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(170)
Yes	35	17.86%	17.86%	20.59%
No	126	64.29%	64.29%	74.12%
Don't know	9	4.59%	4.59%	5.29%
N/A	-	-	13.27%	-

Flooding from sea water				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(169)
Yes	20	10.20%	10.20%	11.83% <sup>´</sup>
No	140	71.43%	71.43%	82.84%
Don't know	9	4.59%	4.59%	5.33%
N/A	-	-	13.78%	-

Storms				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(177)
Yes	123	62.76%	62.76%	69.49%
No	46	23.47%	23.47%	25.99%
Don't know	8	4.08%	4.08%	4.52%
N/A	-	-	9.69%	-

Coastal storm surges				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(170)
Yes	30	15.31%	15.31% <sup>°</sup>	17.65% <sup>′</sup>
No	131	66.84%	66.84%	77.06%
Don't know	9	4.59%	4.59%	5.29%
N/A	-	-	13.27%	-

Rock falls and landslides				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(171)
Yes	38	19.39%	19.39%	22.22%
No	121	61.73%	61.73%	70.76%
Don't know	12	6.12%	6.12%	7.02%
N/A	-	-	12.76%	-

Subsidence				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(165)
Yes	31	15.82%	15.82%	18.79%
No	97	49.49%	49.49%	58.79%
Don't know	37	18.88%	18.88%	22.42%
N/A	-	-	15.82%	-

Fires in natural areas				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(175)
Yes	63	32.14%	32.14%	36.00%
No	95	48.47%	48.47%	54.29%
Don't know	17	8.67%	8.67%	9.71%
N/A	-	-	10.71%	-

Other (please specify below	if selected)			
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(95)
Yes	12	6.12%	6.12% ´	12.63%
No	46	23.47%	23.47%	48.42%
Don't know	37	18.88%	18.88%	38.95%
N/A	-	-	51.53%	-

Looking ahead, are you aware of evidence relating to a potential increase or decrease in frequency or severity of weather and climate-related hazards and/or extreme events in your city over the next 30 years? Please select all that apply, stating if you think each will increase, decrease or show no change in the future.

Periods of very hot weather or heat waves				
Will increase	Number of requested records 159	% Requested records(196)	% of total number records(196) 81.12%	% of total number records(184) 86.41%
No change	8	4.08%	4.08%	4.35%
Will decrease	3	1.53%	1.53%	1.63%
Not relevant	2	1.02%	1.02%	1.09%
Don't know	12	6.12%	6.12%	6.52%
N/A	-	-	6.12%	-

Periods of extreme cold and/or heavy snowfall or ice				
Will increase	Number of requested records 79	% Requested records(196) 40.31%	% of total number records(196) 40.31%	% of total number records(180) 43.89%
No change	28	14.29%	14.29%	15.56%
Will decrease	32	16.33%	16.33%	17.78%
Not relevant	12	6.12%	6.12%	6.67%
Don't know	29	14.80%	14.80%	16.11%
N/A	-	-	8.16%	-

Flooding from rivers				
Will increase	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(176) 45.45%
Will increase	80		40.82%	
No change	41	20.92%	20.92%	23.30%
Will decrease  Not relevant	7 34	3.57% 17.35%	3.57% 17.35%	3.98% 19.32%
Don't know	14	7.14%	7.14%	7.95%
N/A	1 <del>4</del> -	7.14%	10.20%	7.95%

Flooding from heavy rainfall				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(177)
Will increase	130	66.33%	66.33%	73.45%
No change	20	10.20%	10.20%	11.30%
Will decrease	5	2.55%	2.55%	2.82%
Not relevant	10	5.10%	5.10%	5.65%
Don't know	12	6.12%	6.12%	6.78%

N/A - 9.69%

Flooding from rapid snow or i	ce melt			
Will increase	Number of requested records 33	% Requested records(196)	% of total number records(196) 16.84%	% of total number records(170) 19.41%
No change	51	26.02%	26.02%	30.00%
Will decrease	10	5.10%	5.10%	5.88%
Not relevant	48	24.49%	24.49%	28.24%
Don't know	28	14.29%	14.29%	16.47%
N/A	-	-	13.27%	-

Flooding from sea water				
Will increase	Number of requested records 33	% Requested records(196)	% of total number records(196) 16.84%	% of total number records(169) 19.53%
No change	39	19.90%	19.90%	23.08%
Will decrease	0	0.00%	0.00%	0.00%
Not relevant	82	41.84%	41.84%	48.52%
Don't know	15	7.65%	7.65%	8.88%
N/A	-	-	13.78%	-

	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(177)
Will increase	126	64.29%	64.29%	71.19%
No change	25	12.76%	12.76%	14.12%
Will decrease	2	1.02%	1.02%	1.13%
Not relevant	9	4.59%	4.59%	5.08%
Don't know	15	7.65%	7.65%	8.47%
N/A	-	_	9.69%	-

Storms				
Will increase	Number of requested records 95	% Requested records(196)	% of total number records(196) 48,47%	% of total number records(172) 55.23%
No change	34	17.35%	17.35%	19.77%
ŭ	_			
Will decrease	3	1.53%	1.53%	1.74%
Not relevant	10	5.10%	5.10%	5.81%
Don't know	30	15.31%	15.31%	17.44%
N/A	-	-	12.24%	-

Coastal storm surges				
Will increase	Number of requested records 34	% Requested records(196)	% of total number records(196) 17.35%	% of total number records(165) 20.61%
No change	28	14.29%	14.29%	16.97%
Will decrease	1	0.51%	0.51%	0.61%
Not relevant	85	43.37%	43.37%	51.52%
Don't know	17	8.67%	8.67%	10.30%
N/A	-	-	15.82%	-

Rock falls and landslides				
Will increase	Number of requested records 29	% Requested records(196)	% of total number records(196) 14.80%	% of total number records(169) 17.16%
No change	43	21.94%	21.94%	25.44%
Will decrease	1	0.51%	0.51%	0.59%
Not relevant	70	35.71%	35.71%	41.42%
Don't know	26	13.27%	13.27%	15.38%
N/A	-	-	13.78%	-

Subsidence				
Will increase	Number of requested records 24	% Requested records(196)	% of total number records(196) 12.24%	% of total number records(169) 14.20%
No change	41	20.92%	20.92%	24.26%
Will decrease	1	0.51%	0.51%	0.59%
Not relevant	51	26.02%	26.02%	30.18%
Don't know	52	26.53%	26.53%	30.77%
N/A	-	-	13.78%	-

Fires in natural areas				
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(169)
Will increase	63	32.14%	32.14%	37.28%
No change	44	22.45%	22.45%	26.04%
Will decrease	1	0.51%	0.51%	0.59%
Not relevant	26	13.27%	13.27%	15.38%
Don't know	35	17.86%	17.86%	20.71%
N/A	-	-	13.78%	-

Other (please specify below	if selected)			
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(74)
Will increase	9	4.59%	4.59%	12.16%
No change	8	4.08%	4.08%	10.81%
Will decrease	0	0.00%	0.00%	0.00%
Not relevant	18	9.18%	9.18%	24.32%
Don't know	39	19.90%	19.90%	52.70%
N/A	-	-	62.24%	-

# Adaptation support

What support exists in your country that relates to adaptation at city level? Please select all that apply.

Adaptation strategy				
	Number of requested records	% Requested records(196)	% of total number records(196)	
Local level	50	25.51%	25.51%	
Regional level	48	24.49%	24.49%	

National level	90	45.92%	45.92%
None	41	20.92%	20.92%

Adaptation Programme or ac	tion plan			
	Number of requested records	% Requested records(196)	% of total number records(196)	
Local level	53	27.04%	27.04%	
Regional level	43	21.94%	21.94%	
National level	70	35.71%	35.71%	
None	36	18.37%	18.37%	

Adaptation guidance or tool				
Local level	Number of requested records 40	% Requested records(196)	% of total number records(196) 20.41%	% of total number records(195) 20.51%
Regional level	42	21.43%	21.43%	21.54%
National level	66	33.67%	33.67%	33.85%
None	47	23.98%	23.98%	24.10%
N/A	-	-	0.51%	-

Other development strategies (urban, sustainability etc.)				
	Number of requested records	% Requested records(196)	% of total number records(196)	
Local level	110	56.12%	56.12%	
Regional level	79	40.31%	40.31%	
National level	81	41.33%	41.33%	
None	15	7.65%	7.65%	

Data on vulnerability				
Local level	Number of requested records 51	% Requested records(196)	% of total number records(196) 26.02%	
Regional level	72	36.73%	36.73%	
National level	86	43.88%	43.88%	
None	29	14.80%	14.80%	

Data on climate change impac	ts			
	Number of requested records	% Requested records(196)	% of total number records(196)	
Local level	55	28.06%	28.06%	
Regional level	77	39.29%	39.29%	
National level	113	57.65%	57.65%	
None	18	9.18%	9.18%	

Projections of future climate change				
Local level	Number of requested records 42	% Requested records(196)	% of total number records(196) 21.43%	
Regional level National level	71 108	36.22% 55.10%	36.22% 55.10%	

None 21	10.71%	10.71%
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Formal adaptation networks				
Local level	Number of requested records 22	% Requested records(196)	% of total number records(196) 11.22%	% of total number records(185) 11.89%
Regional level	42	21.43%	21.43%	22.70%
National level	63	32.14%	32.14%	34.05%
None	58	29.59%	29.59%	31.35%
N/A	-	-	5.61%	-

Interdepartmental task force				
Local level	Number of requested records 37	% Requested records(196)	% of total number records(196) 18.88%	% of total number records(171) 21.64%
Regional level	28	14.29%	14.29%	16.37%
National level	54	27.55%	27.55%	31.58%
None	52	26.53%	26.53%	30.41%
N/A	-	-	12.76%	-

Funding for climate change adaptation within sectoral budgets					
Number of % Requested % of % of requested records(196) total number total number records (1796) records(1796) records(1796)					
Local level	23	11.73%	11.73%	12.85%	
Regional level	30	15.31%	15.31%	16.76%	
National level	72	36.73%	36.73%	40.22%	
None	54	27.55%	27.55%	30.17%	
N/A	-	-	8.67%	-	

Dedicated funding for climate change adaptation activities				
Local level	Number of requested records 26	% Requested records(196)	% of total number records(196) 13.27%	% of total number records(173) 15.03%
Regional level	24	12.24%	12.24%	13.87%
National level	62	31.63%	31.63%	35.84%
None	61	31.12%	31.12%	35.26%
N/A	-	-	11.73%	-

Other (please specify below	if selected)			
Local level	Number of requested records 10	% Requested records(196) 5.10%	% of total number records(196) 5.10%	% of total number records(39) 25.64%
Regional level	1	0.51%	0.51%	2.56%
National level	2	1.02%	1.02%	5.13%
None	26	13.27%	13.27%	66.67%
N/A	-	-	80.10%	-

Do you agree or disagree that the right information is available to support adaptation planning in your city? Please select one response.				
	Number of requested	% Requested records(196)	% of total number	% of total number

	records		records(196)	records(180)
Strongly agree	25	12.76%	12.76%	13.89%
Agree	42	21.43%	21.43%	23.33%
Neither agree or disagree	48	24.49%	24.49%	26.67%
Disagree	48	24.49%	24.49%	26.67%
Strongly disagree	10	5.10%	5.10%	5.56%
Don't know	7	3.57%	3.57%	3.89%
N/A	-	-	8.16%	-

If you could learn from other European cities about preparing for climate change, which characteristics would most influence your choice of city with which to engage? Please select all that are important.

Population size				
Very important	Number of requested records 61	% Requested records(196)	% of total number records(196) 31.12%	% of total number records(180) 33.89%
Important	102	52.04%	52.04%	56.67%
Not important	16	8.16%	8.16%	8.89%
Don't know	1	0.51%	0.51%	0.56%
N/A	-	-	8.16%	-

Population trend				
Very important	Number of requested records 34	% Requested records(196)	% of total number records(196) 17.35%	% of total number records(173) 19.65%
Important	93	47.45%	47.45%	53.76%
Not important	39	19.90%	19.90%	22.54%
Don't know	7	3.57%	3.57%	4.05%
N/A	-	-	11.73%	-

Geography				
Very important	Number of requested records 123	% Requested records(196)	% of total number records(196) 62.76%	% of total number records(182) 67.58%
Important	51	26.02%	26.02%	28.02%
Not important	6	3.06%	3.06%	3.30%
Don't know	2	1.02%	1.02%	1.10%
N/A	-	-	7.14%	-

Language				
Man inn artart	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(175)
Very important	2	1.02%	1.02%	1.14%
Important	38	19.39%	19.39%	21.71%
Not important	132	67.35%	67.35%	75.43%
Don't know	3	1.53%	1.53%	1.71%
N/A	-	-	10.71%	-

Economy				
	Number of requested	% Requested records(196)	% of total number	% of total number

	records		records(196)	records(177)	
Very important	43	21.94%	21.94%	24.29%	
Important	105	53.57%	53.57%	59.32%	ı
Not important	22	11.22%	11.22%	12.43%	ı
Don't know	7	3.57%	3.57%	3.95%	ı
N/A	-	_	9.69%	-	ı

Climate change impacts or vul	nerabilities			
Very important	Number of requested records 133	% Requested records(196)	% of total number records(196) 67.86%	% of total number records(185) 71.89%
Important	47	23.98%	23.98%	25.41%
Not important	4	2.04%	2.04%	2.16%
Don't know	1	0.51%	0.51%	0.54%
N/A	-	-	5.61%	-

Level of adaptation planning				
Very important	Number of requested records 97	% Requested records(196) 49.49%	% of total number records(196) 49.49%	% of total number records(182) 53.30%
Important	68	34.69%	34.69%	37.36%
Not important	15	7.65%	7.65%	8.24%
Don't know	2	1.02%	1.02%	1.10%
N/A	-	-	7.14%	-

Other (please specify below i	f selected)			
Very important	Number of requested records 11	% Requested records(196) 5.61%	% of total number records(196) 5.61%	% of total number records(52) 21.15%
Important	6	3.06%	3.06%	11.54%
Not important	2	1.02%	1.02%	3.85%
Don't know	33	16.84%	16.84%	63.46%
N/A	-	-	73.47%	-

# Your city's status on adaptation to climate change

Please select the one option that in your opinion best describes your city's current status on adaptation to climate change. Clarification: This self-assessment question is correlated with PACT. PACT is an evidence-based framework for assessing and improving your organisation's response to the challenges posed by climate change. It has been widely tested in many types of organisation in different countries and is backed by a growing evidence base and robust statistical analysis. By 'adaptation' in this context we mean dealing both with current climate impacts and those that may be expected as a consequence of future climate change. At present, many cities have yet to begin to prepare for the impacts of climate change. However, a few are moving further ahead. By 'adaptation programme' we mean a formally adopted programme which is being implemented. We are looking for your opinion here as to how far your city has moved from hardly any action at all to taking appropriate account of possible future climate changes in all its actions.

	Number of requested records	% Requested records(196)	% of total number records(196)	
Not yet begun work on climate adaptation	58	29.59%	29.59%	
Very early stages	92	46.94%	46.94%	
Well on the way	32	16.33%	16.33%	

Moving ahead of the field	11	5.61%	5.61%	
Our climate adaptation programme is	3	1.53%	1.53%	
far advanced				

If your city has not yet begun work on climate adaptation, are you planning to do so in the near future?				
	Number of requested records	% Requested records(58)	% of total number records(196)	
Yes	42	72.41%	21.43%	
No	16	27.59%	8.16%	

If your city has not yet developed an add select all that apply.	aptation strategy,	, please outline the	e main reasons for this.	Please
second and apply?	Number of requested records	% Requested records(16)	% of total number records(58)	
Lack of political commitment	9	56.25%	15.52%	
Lack of national guidance	8	50.00%	13.79%	
Lack of regional guidance	9	56.25%	15.52%	
Lack of urban guidance	8	50.00%	13.79%	
Lack of national tools	9	56.25%	15.52%	
Lack of regional tools	11	68.75%	18.97%	
Lack of urban tools	8	50.00%	13.79%	
Lack of national climate data/projections	5	31.25%	8.62%	
Lack of regional climate data/projections	8	50.00%	13.79%	
Lack of local climate data/projections	8	50.00%	13.79%	
Lack of budget or resources	14	87.50%	24.14%	
Lack of agreement on the responsibility at city department level	2	12.50%	3.45%	
Lack of skills and expertise in the area	7	43.75%	12.07%	
Lack of legal obligation	4	25.00%	6.90%	
Other policy priorities	6	37.50%	10.34%	
Uncertainty on where to start	6	37.50%	10.34%	
Other	0	0.00%	0.00%	

Are you aware of any major regeneration plans in your city? Please select all that apply and indicate whether the plans are already in place or foreseen in the near future.

Major urban regeneration plans				
	Number of requested records	% Requested records(196)	% of total number records(196)	
Plans in place	75	38.27%	38.27%	
Foreseen for the next 5 years	63	32.14%	32.14%	
No plans / not foreseen	33	16.84%	16.84%	
Don't know	25	12.76%	12.76%	

Major water infrastructure investment			
	Number of requested records	% Requested records(196)	% of total number records(196)
Plans in place	71	36.22%	36.22%
Foreseen for the next 5 years	51	26.02%	26.02%
No plans / not foreseen	42	21.43%	21.43%
Don't know	32	16.33%	16.33%

Major sewerage infrastructure investment				
	Number of requested records	% Requested records(196)	% of total number records(196)	
Plans in place	69	35.20%	35.20%	
Foreseen for the next 5 years	54	27.55%	27.55%	
No plans / not foreseen	36	18.37%	18.37%	
Don't know	37	18.88%	18.88%	

Major industrial investment				
	Number of requested records	% Requested records(196)	% of total number records(196)	
Plans in place	22	11.22%	11.22%	
Foreseen for the next 5 years	39	19.90%	19.90%	
No plans / not foreseen	78	39.80%	39.80%	
Don't know	57	29.08%	29.08%	

Other (please specify below if selec	ted)			
	Number of requested records	% Requested records(196)	% of total number records(196)	% of total number records(65)
Plans in place	7	3.57%	3.57%	10.77%
Foreseen for the next 5 years	6	3.06%	3.06%	9.23%
No plans / not foreseen	5	2.55%	2.55%	7.69%
Don't know	47	23.98%	23.98%	72.31%
N/A	-	-	66.84%	-

Does your city have an adaptat	ion strategy?			
Yes	Number of requested records	% Requested records(138)	% of total number records(196)	
res	47	34.06%	23.98%	
No	91	65.94%	46.43%	

What are/were the main reasons for developing your city's adaptation strategy? Please select all that apply.					
	Number of requested records	% Requested records(180)	% of total number records(196)		
National / Regional government requirement or recommendation	80	44.44%	40.82%		
Exposure to extreme weather	76	42.22%	38.78%		
Cost of business as usual versus action now	59	32.78%	30.10%		
Vision of a sustainable city	146	81.11%	74.49%		
Objective to improve the quality of life for citizens	121	67.22%	61.73%		
Other	10	5.56%	5.10%		

Further details on your city's status on adaptation to climate change

Is your adaptation strategy / will your adaptation strategy be:

Mandatory due to a legal obligation			
No	Number of requested records 64	% Requested records(180)	% of total number records(196) 32.65%
Yes Don't know	25 33	13.89% 18.33%	12.76% 16.84%

A required policy document strategy	due to the city making a pul	blic commitment to	voluntarily produce an adaptation
	Number of requested records	% Requested records(180)	% of total number records(196)
No	25	13.89%	12.76%
Yes	62	34.44%	31.63%
Don't know	29	16.11%	14.80%

To be regularly revised				
No	Number of requested records 10	% Requested records(180) 5.56%	% of total number records(196) 5.10%	
Yes Don't know	84 24	46.67% 13.33%	42.86% 12.24%	

Supported by a dedicated financial budget					
No	Number of requested records 26	% Requested records(180)	% of total number records(196) 13.27%		
Yes	37	20.56%	18.88%		
Don't know	55	30.56%	28.06%		

Integrated in a wider strategy such as an urban development or a sustainability strategy				
No	Number of requested records 9	% Requested records(180) 5.00%	% of total number records(196) 4.59%	
Yes Don't know	91 20	50.56% 11.11%	46.43% 10.20%	

Supported by an adaptation p	orogramme or action plan			
No	Number of requested records 10	% Requested records(180) 5.56%	% of total number records(196) 5.10%	
Yes	86	47.78%	43.88%	
Don't know	22	12.22%	11.22%	

# Assessing the risks of climate change

To what extent has your city assessed the risks (and any opportunities) over the following timescales that might arise from changing weather patterns and/or climate change? Here is a list of issues that are often covered in such assessments. For each of these please tick the time horizons over which you have made assessments, or indicate if you are planning to do so in the future.

City-owned buildings			
0 to 10 years	Number of requested records 45	% Requested records(180)	% of total number records(196) 22.96%
11 to 30 years	19	10.56%	9.69%
31 to 50 years	6	3.33%	3.06%
50+ years	4	2.22%	2.04%
Risk assessment planned for the future	23	12.78%	11.73%
No risk assessment foreseen	40	22.22%	20.41%
Don't know	43	23.89%	21.94%

Other buildings				
0 to 10 years	Number of requested records 18	% Requested records(180)	% of total number records(196) 9.18%	
11 to 30 years	21	11.67%	10.71%	
31 to 50 years	7	3.89%	3.57%	
50+ years	4	2.22%	2.04%	
Risk assessment planned for the future	19	10.56%	9.69%	
No risk assessment foreseen	42	23.33%	21.43%	
Don't know	69	38.33%	35.20%	

Infrastructure			
0 to 10 years	Number of requested records 33	% Requested records(180)	% of total number records(196) 16.84%
11 to 30 years	23	12.78%	11.73%
31 to 50 years	10	5.56%	5.10%
50+ years	6	3.33%	3.06%
Risk assessment planned for the future	30	16.67%	15.31%
No risk assessment foreseen	28	15.56%	14.29%
Don't know	50	27.78%	25.51%

Water supplies			
0 to 10 years	Number of requested records 40	% Requested records(180)	% of total number records(196) 20.41%
11 to 30 years	16	8.89%	8.16%
31 to 50 years	12	6.67%	6.12%
50+ years	8	4.44%	4.08%
Risk assessment planned for the future	30	16.67%	15.31%
No risk assessment foreseen	25	13.89%	12.76%
Don't know	49	27.22%	25.00%

Energy supplies				
	Number of requested records	% Requested records(180)	% of total number records(196)	
0 to 10 years	43	23.89%	21.94%	
11 to 30 years	12	6.67%	6.12%	
31 to 50 years	9	5.00%	4.59%	
50+ years	4	2.22%	2.04%	

Risk assessment planned for the future	36	20.00%	18.37%
No risk assessment foreseen	20	11.11%	10.20%
Don't know	56	31.11%	28.57%

Human health				
0 to 10 years	Number of requested records 34	% Requested records(180)	% of total number records(196) 17.35%	
11 to 30 years	11	6.11%	5.61%	
31 to 50 years	7	3.89%	3.57%	
50+ years	2	1.11%	1.02%	
Risk assessment planned for the future	35	19.44%	17.86%	
No risk assessment foreseen	27	15.00%	13.78%	
Don't know	64	35.56%	32.65%	

Number of % Requested % of requested records(180) total number records records(196)	
0 to 10 years 34 18.89% 17.35%	
11 to 30 years 13 7.22% 6.63%	
31 to 50 years 5 2.78% 2.55%	
50+ years 3 1.67% 1.53%	
Risk assessment planned for the future 35 19.44% 17.86%	
No risk assessment foreseen 27 15.00% 13.78%	
Don't know 63 35.00% 32.14%	

Biodiversity			
0 to 10 years	Number of requested records 37	% Requested records(180)	% of total number records(196) 18.88%
11 to 30 years	18	10.00%	9.18%
31 to 50 years 50+ years	6 4	3.33% 2.22%	3.06% 2.04%
Risk assessment planned for the future	38	21.11%	19.39%
No risk assessment foreseen Don't know	25 52	13.89% 28.89%	12.76% 26.53%

Food security				
0 to 10 years	Number of requested records 19	% Requested records(180)	% of total number records(196) 9.69%	
11 to 30 years	12	6.67%	6.12%	
31 to 50 years	3	1.67%	1.53%	
50+ years	2	1.11%	1.02%	
Risk assessment planned for the future	22	12.22%	11.22%	
No risk assessment foreseen	48	26.67%	24.49%	
Don't know	74	41.11%	37.76%	

Sewage			
	Number of requested records	% Requested records(180)	% of total number records(196)

0 to 10 years	52	28.89%	26.53%
11 to 30 years	15	8.33%	7.65%
31 to 50 years	13	7.22%	6.63%
50+ years	7	3.89%	3.57%
Risk assessment planned for the future	21	11.67%	10.71%
No risk assessment foreseen	20	11.11%	10.20%
Don't know	52	28.89%	26.53%
l e e e e e e e e e e e e e e e e e e e			

Industry			
	Number of requested records	% Requested records(180)	% of total number records(196)
0 to 10 years	19	10.56%	9.69%
11 to 30 years	15	8.33%	7.65%
31 to 50 years	9	5.00%	4.59%
50+ years	1	0.56%	0.51%
Risk assessment planned for the future	22	12.22%	11.22%
No risk assessment foreseen	34	18.89%	17.35%
Don't know	80	44.44%	40.82%

Other (please specify below if selected)			
0 to 10 years	Number of requested records 4	% Requested records(180)	% of total number records(196) 2.04%
11 to 30 years	2	1.11%	1.02%
31 to 50 years	0	0.00%	0.00%
50+ years	1	0.56%	0.51%
Risk assessment planned for the future	3	1.67%	1.53%
No risk assessment foreseen	3	1.67%	1.53%
Don't know	46	25.56%	23.47%

What resources and sources of evidence	did/do you plan	to use in future for	r these assessments of
risk? Please tick all that apply.			
	Number of requested records	% Requested records(180)	% of total number records(196)
Specially commissioned scientists (e.g. from a university)	86	47.78%	43.88%
Probabilistic impact projections (e.g. from climate scenarios)	79	43.89%	40.31%
Other impact projections (e.g. from IPCC or from National Government)	68	37.78%	34.69%
Specialist consultancies	70	38.89%	35.71%
Specialist in-house experts	69	38.33%	35.20%
General consultancies	26	14.44%	13.27%
Other in-house staff	63	35.00%	32.14%
Stakeholder consultation (e.g. with local businesses)	68	37.78%	34.69%
Media sources	34	18.89%	17.35%
Specialist risk assessment tools/methods	64	35.56%	32.65%
Other sources	5	2.78%	2.55%

# Details on your city's adaptation strategy

Which of the following hazards does your adaptation strategy address? Please select all that apply.

	Number of requested records	% Requested records(180)	% of total number records(196)
Periods of very hot weather or heat waves	77	42.78%	39.29%
Periods of extreme cold and/or heavy snowfall and ice	30	16.67%	15.31%
Periods of reduced water availability, scarcity or drought	55	30.56%	28.06%
Flooding from rivers	50	27.78%	25.51%
Flooding from heavy rainfall	61	33.89%	31.12%
Flooding from rapid snow or ice melt	7	3.89%	3.57%
Flooding from sea water	25	13.89%	12.76%
Storms	43	23.89%	21.94%
Coastal storm surges	18	10.00%	9.18%
Rock falls and landslides	11	6.11%	5.61%
Subsidence	11	6.11%	5.61%
Fires in natural areas	30	16.67%	15.31%
Not sure	2	1.11%	1.02%
Other	10	5.56%	5.10%

What are you planning to undertake to further develop your adaptation strategy? Please select all that apply. "Break-though" projects are sometimes (but not always) needed to address longer term climate impacts - typically at least 10 years, often more. They need to go well beyond current custom and practice, looking to make substantial and innovative changes, for example to design, procedures, strategy etc. Such projects are not desk exercises but involve close co-operation with a range of partners. They would normally involve significant work over a minimum of six months, often longer.

3			
	Number of requested records	% Requested records(180)	% of total number records(196)
Further specific sectoral research	58	32.22%	29.59%
Further specific cross-cutting research	46	25.56%	23.47%
"Break-through" projects (projects that aim to find ways of solving adaptation for which no solution is currently evident)	42	23.33%	21.43%
Other	3	1.67%	1.53%

### **Engagement**

As you developed this strategy, to what extent did you engage (or have developed plans to engage) with the groups below? Please tick all that apply to the relevant categories.

Elected city politicians				
Formal partnership	Number of requested records 46	% Requested records(180)	% of total number records(196) 23.47%	
Written consultation	8	4.44%	4.08%	
Interviews	3	1.67%	1.53%	
Workshops	13	7.22%	6.63%	
No engagement yet, but foreseen	16	8.89%	8.16%	
No engagement foreseen	1	0.56%	0.51%	
Do not know	8	4.44%	4.08%	

#### National Government

		Number of	% Requested	% of
		requested	records(180)	total number
		records		records(196)
Formal partr	nership	22	12.22%	11.22%
Written cons	sultation	10	5.56%	5.10%
Interviews		3	1.67%	1.53%
Workshops		10	5.56%	5.10%
No engagen	nent yet, but foreseen	15	8.33%	7.65%
No engagen	nent foreseen	16	8.89%	8.16%
Do not know	I	14	7.78%	7.14%

Regional Government			
	Number of requested records	% Requested records(180)	% of total number records(196)
Formal partnership Written consultation	31 9	17.22% 5.00%	15.82% 4.59%
Interviews	1	0.56%	0.51%
Workshops	17	9.44%	8.67%
No engagement yet, but foreseen	16	8.89%	8.16%
No engagement foreseen	10	5.56%	5.10%
Do not know	11	6.11%	5.61%

Spatial planners from within your city				
Formal partnership	Number of requested records 20	% Requested records(180)	% of total number records(196) 10.20%	
Written consultation	6	3.33%	3.06%	
Interviews	6	3.33%	3.06%	
Workshops	27	15.00%	13.78%	
No engagement yet, but foreseen	17	9.44%	8.67%	
No engagement foreseen	3	1.67%	1.53%	
Do not know	9	5.00%	4.59%	

Interdepartmental city group or task force				
	Number of requested records	% Requested records(180)	% of total number records(196)	
Formal partnership	19	10.56%	9.69%	
Written consultation	12	6.67%	6.12%	
Interviews	1	0.56%	0.51%	
Workshops	22	12.22%	11.22%	
No engagement yet, but foreseen	13	7.22%	6.63%	
No engagement foreseen	7	3.89%	3.57%	
Do not know	13	7.22%	6.63%	

Health providers			
Formal partnership	Number of requested records 13	% Requested records(180)	% of total number records(196) 6.63%
Written consultation	13	7.22%	6.63%
Interviews	7	3.89%	3.57%
Workshops	14	7.78%	7.14%
No engagement yet, but foreseen	16	8.89%	8.16%

No engagement foreseen	11	6.11%	5.61%	
Do not know	15	8.33%	7.65%	

Emergency services (e.g. fire, police)				
	Number of requested records	% Requested records(180)	% of total number records(196)	
Formal partnership	19	10.56%	9.69% ´	
Written consultation	9	5.00%	4.59%	
Interviews	7	3.89%	3.57%	
Workshops	17	9.44%	8.67%	
No engagement yet, but foreseen	15	8.33%	7.65%	
No engagement foreseen	9	5.00%	4.59%	
Do not know	13	7.22%	6.63%	

	Number of requested records	% Requested records(180)	% of total number records(196)
Formal partnership	13	7.22%	6.63%
Written consultation	11	6.11%	5.61%
Interviews	5	2.78%	2.55%
Workshops	27	15.00%	13.78%
No engagement yet, but foreseen	13	7.22%	6.63%
No engagement foreseen	8	4.44%	4.08%
Do not know	11	6.11%	5.61%

City citizens				
Formal partnership	Number of requested records 10	% Requested records(180) 5.56%	% of total number records(196) 5.10%	
Written consultation	12	6.67%	6.12%	
Interviews	4	2.22%	2.04%	
Workshops	28	15.56%	14.29%	
No engagement yet, but foreseen	24	13.33%	12.24%	
No engagement foreseen	5	2.78%	2.55%	
Do not know	9	5.00%	4.59%	

Local communities			
	Number of requested records	% Requested records(180)	% of total number records(196)
Formal partnership	10	5.56%	5.10%
Written consultation	11	6.11%	5.61%
Interviews	4	2.22%	2.04%
Workshops	29	16.11%	14.80%
No engagement yet, but foreseen	22	12.22%	11.22%
No engagement foreseen	5	2.78%	2.55%
Do not know	9	5.00%	4.59%

Vulnerable population groups				
	Number of requested	% Requested records(180)	% of total number	

	records		records(196)
Formal partnership	7	3.89%	3.57%
Written consultation	7	3.89%	3.57%
Interviews	6	3.33%	3.06%
Workshops	17	9.44%	8.67%
No engagement yet, but foreseen	22	12.22%	11.22%
No engagement foreseen	11	6.11%	5.61%
Do not know	18	10.00%	9.18%

Other (please specify below if selected)					
	Number of requested records	% Requested records(180)	% of total number records(196)		
Formal partnership	4	2.22%	2.04%		
Written consultation	2	1.11%	1.02%		
Interviews	0	0.00%	0.00%		
Workshops	2	1.11%	1.02%		
No engagement yet, but foreseen	1	0.56%	0.51%		
No engagement foreseen	1	0.56%	0.51%		
Do not know	16	8.89%	8.16%		

### **Commitment of resources**

If you have a strategy in place, to what extent have resources (financial and human) been approved to implement the strategy? Please select the answer that best describes the situation in your city.

implement the strategy: Please select the answer that best describes the situation in your city.				
	Number of requested records	% Requested records(180)	% of total number records(196)	
Resources not yet allocated	40	22.22%	20.41%	
Resources partially allocated (e.g. for one department or sector)	34	18.89%	17.35%	
Resources fully allocated for current budgeting period	4	2.22%	2.04%	
Resources fully allocated also beyond current budgeting period	2	1.11%	1.02%	
Do not know	9	5.00%	4.59%	

# Your city's interest in participating in the project

Are you interested in actively participating in the project? If yes, please indicate the kinds of activities you are interested in. Please tick all that apply.

are interested in. Please tick all that ap	ppty.		
	Number of requested records	% Requested records(180)	% of total number records(196)
Sharing information and experience via web portal	121	67.22%	61.73%
Support the development of tools and guidance	82	45.56%	41.84%
Participate in workshops and stakeholder dialogues	97	53.89%	49.49%
Participate in the capacity building programme as a city that is advanced in the adaptation process	20	11.11%	10.20%
Participate in the capacity building programme as a city that is in the beginning of the adaptation process	92	51.11%	46.94%

Bilateral exchange with another city	86	47.78%	43.88%	
No interest	0	0.00%	0.00%	
Other	4	2.22%	2.04%	

# **Training needs**

What types of knowledge or capacities need to be developed in your organisation? Please select all that apply.					
	Number of requested records	% Requested records(180)	% of total number records(196)		
Understanding of climate change	55	30.56%	28.06%		
Communicating climate change	66	36.67%	33.67%		
Knowledge on climate impacts	89	49.44%	45.41%		
Assessing impacts	99	55.00%	50.51%		
Prioritising risks	93	51.67%	47.45%		
Developing adaptation options	113	62.78%	57.65%		
Implementing adaptation measures	105	58.33%	53.57%		
Creating organisational support	79	43.89%	40.31%		
Involving the community	101	56.11%	51.53%		
Don't know	3	1.67%	1.53%		
Other	2	1.11%	1.02%		

# **End of survey**

Please let us know if you would like to continue receiving information about this project.					
	Number of requested records	% Requested records(196)	% of total number records(196)		
Yes	188	95.92%	95.92%		
No	8	4.08%	4.08%		

# **RICARDO-AEA**

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